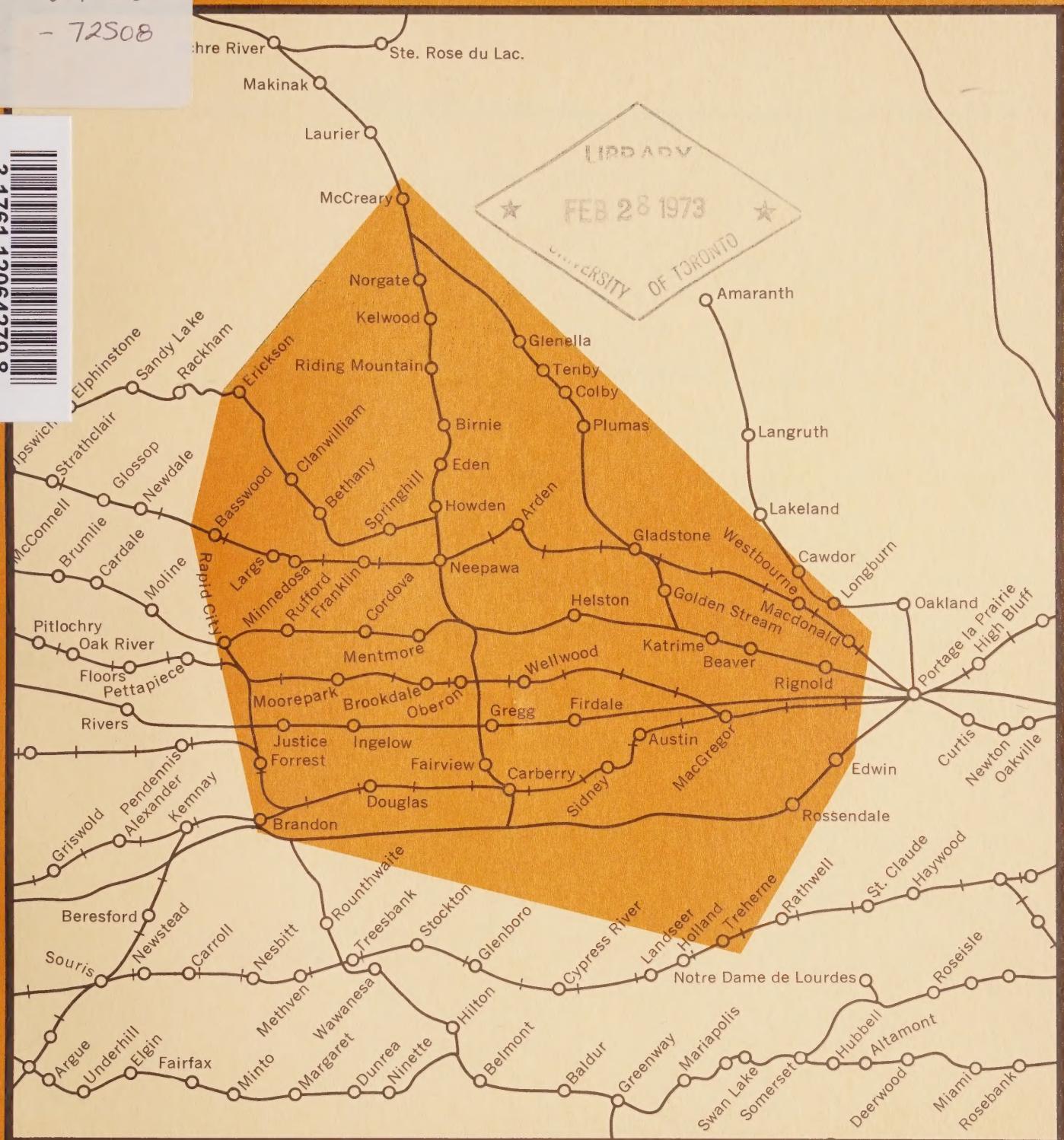


BRANDON-NEEPAWA REGION OF MANITOBA

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PRAIRIE REGIONAL STUDIES IN ECONOMIC GEOGRAPHY No. 8

THE BRANDON-NEEPAWA REGION OF MANITOBA



J.W. CHANNON, K.J. MORISON

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1. The Riverhurst Region of Saskatchewan by A.W. Burges, Geographical Branch, Department of Energy, Mines and Resources; and J.W. Channon, Economics Branch, Canada Department of Agriculture.
(Supplement to Riverhurst Regional Report, September, 1967)
2. The Boissevain Region of Manitoba by J.W. Channon, D. Zasada and R.T. Miller, Economics Branch, Canada Department of Agriculture.
3. The Rockglen Region of Saskatchewan by J.W. Channon, D. Zasada and R.T. Miller, Economics Branch, Canada Department of Agriculture. Pub. No. 69/11. August 1969.
4. The Camrose-Vegreville Region of Alberta by J.W. Channon and D. Zasada, Economics Branch, Canada Department of Agriculture. Pub. No. 69/16. November 1969.
5. The Weyburn Region of Saskatchewan, by J.W. Channon, H.R. Fast and D.A. Neil, Economics Branch, Canada Department of Agriculture. Pub. No. 71/4. May 1971.
6. The Killarney Region of Manitoba by J.W. Channon, D. Zasada and K. Morison, Economics Branch, Canada Department of Agriculture. Pub. No. 71/7. November 1971.
7. The Eston-Elrose Region of Saskatchewan, by J.W. Channon, H.R. Fast and D.A. Neil, Economics Branch, Canada Department of Agriculture. Pub. No. 71/12.
8. The Brandon-Neepawa Region of Manitoba, by J.W. Channon and K. Morison, Economics Branch, Canada Department of Agriculture. Pub. No. 71/15. 1972.



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PREFACE

Bill C-120 was given first reading in the House of Commons on September 14, 1964. This was the first attempt to implement the recommendations of the MacPherson Royal Commission on Transportation. It never became law as the twenty-sixth parliament was dissolved before the bill passed through the Commons. That bill would have established the Branch Line Rationalization Authority, responsible to the Minister of Agriculture.

Bill C-231, which succeeded Bill C-120, was given first reading on August 29, 1966 and subsequently became what is now in the statutes as the National Transportation Act, R.S.C. 1970 Ch. N-17. This bill established the Canadian Transport Commission, comprising several committees, including the Railway Transport Committee. This latter committee was allocated the responsibilities which would have been given to the Branch Line Rationalization Authority. The Railway Transport Committee is responsible, through the Canadian Transport Commission, to the Minister of Transport. Accordingly the Minister of Agriculture now has no direct authority in the field of branch line abandonment. However, because of the responsibilities of the Canadian Grain Commission in regulating the grain warehouse industry, the Minister of Agriculture has a direct interest in the impact of branch line rationalization on this railway-related industry. He also is concerned, of course, with the effects of such changes on the welfare of western grain producers.

Prairie Regional Studies in Economic Geography had their origin in work carried out for the Minister of Agriculture, beginning in February 1964. Later that year Mr. A.W. Burges began a study of the prairie branch line network for the Department of Mines and Technical Surveys. It seemed logical and economical to merge the two. This was done and the Riverhurst Report became No. 1 in the series of Prairie Regional Studies. The present report on the Brandon-Neepawa Region of Manitoba is No. 8 in this series.

The Brandon-Neepawa Region lies directly north of that dealt with in Study No. 6, the Killarney Region of Manitoba, and directly east of an area that is currently being examined and will be reported on soon in a study covering the Virden Region of Manitoba. Together with the Boissevain Report (No. 2 in the series) these four reports will have effectively covered the south-west corner of Manitoba.

As noted in the previous reports, the emphasis is on grain farms and the communities and facilities serving these farms. In all, some 50 grain delivery points are examined and reported on. The communities are listed in Table 1 and again in virtually all the other tables in the report. The tabular data and their accompanying text, figures and maps,

describe the socio-economic activity of the region. From all the material provided the reader may gain an appreciation of the relative importance of the farms and the communities in the Brandon-Neepawa region, and having done this he may be in a better position to assess the impact of proposed programs and contemplated changes in the infrastructure of the region.

It is readily admitted that the data contained in this report do not constitute an exhaustive coverage of all the parameters. The material being presented is intended to help those individuals and firms affected by changes to understand the rationale of any changes in grain collection and distribution, some of which have been under way for some years. Undoubtedly this will intensify over the next few years as inflationary pressures work on the cost structures of the grain production industry, the elevator industry and the railways.

The report is organized into five parts, these being: the community characteristics; grain production characteristics; grain marketing characteristics; a suggested alternative grain collection system for the region; and lastly, a description of the major legislation regulating the three industries, together with the basic functions of the regulatory bodies. For added perspective a chronology of grain-oriented legislation and events is appended.

An extra word of explanation regarding Part IV is perhaps warranted. The alternative system suggested has no official status whatsoever. Indeed, it is highly unlikely that the exact pattern used in this report will ever become the real-life setup. What the authors have done is to scan all the delivery points in the region and select from them those which they believed to be the least likely to survive as grain shipping points, having regard to the density of traffic on the rail lines serving them, the number of producers who have taken out delivery permits at those points, and the distance from other delivery points that might remain in operation. In addition, consideration was given to the wishes of the railway companies and the elevator companies. The evidence used to gauge what the railways wanted was the applications, for permission to abandon lines, filed at one time with the Canadian Transport Commission. The thoughts of the elevator companies were based on calculated guesses, bolstered by the history of the volume of grain per year that has been put through the point. The map showing what the remaining delivery point hinterlands would look like is the result of closing the points so chosen. Without the exercise of hypothetically closing down elevator points, this map would not be possible and readers would be denied a glimpse into what could possibly be in store for the people living in these areas. An approximation of what the region would look like under this sort of rationalization is all that is intended.

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PART I

COMMUNITY CHARACTERISTICS

Classification of Communities

The Brandon-Neepawa Region of Manitoba, as delineated for purposes of this study, comprises fifty communities for which the Canadian Wheat Board establishes grain delivery quotas. These places are the concern of this part of the study.

Within the region there are a dozen or more communities which the study has ignored. Some of them are former grain shipping points but they have long since lost that function. Norgate, Ogilvie and Keyes are examples. Others never were elevator points but rather owe their identity to the railway companies; for instance Hallboro and Muir are Canadian National junction points. In any case none of them now function as grain shipping points and consequently do not have hinterlands that can be described as grain farmland tributary to these particular communities.

For delivery quota purposes the Canadian Wheat Board has ruled that the two separate communities of Justice and Douglas are deemed to be one grain delivery point. Thus, while the study deals with fifty communities there are only forty-nine official grain receiving points.

As will be noted in Tables 1 and 2, the grain delivery communities have been ranked according to the number of services offered in each, from the fewest number to the greatest. This ranking was then classified by groups of communities according to the range of the

number of services. Thus, there are eight points that have been deemed to be "too small to classify", being the location of grain elevators on the railway right of way with no other services present. The extra service noted in Table 2 is merely an indication that the elevator agent can supply some farm chemicals and fertilizers.

A word of explanation is required about the grain elevator service. The system of classification used in the study is an arbitrary one. In keeping with this the authors have defined the elevator function in terms of grain company rather than a physical structure. Thus while there are three active elevators in Plumas they are all owned and operated by one company and therefore there is only one elevator service there. At Treherne there are four active elevators licensed but they are owned by three different grain companies and so there are three elevator services at Treherne. Where it is known that an elevator is situated in a community but it is being used for storage only, it is not considered as offering a service.

The smallest communities have been designated as hamlets, defined as places where from three to nine services are available to the public. In addition to the grain elevator the services include a general store, usually including gasoline pumps, recreational facilities such as a curling rink or a skating rink, and in some places a meeting hall or a church. Most of the hamlets in the Brandon-Neepawa Region have a post office.

TABLE 1. CLASSIFICATION OF COMMUNITIES IN THE STUDY AREA

Too Small to Classify 0-2 Services	Hamlets 3-9 Services	Villages 10-35 Services	Towns 36-70 Services	Greater Towns 71 + Services	Cities
Rufford	Cordova	Riding Mountain	Austin	Erickson	
Colby	Gregg	Rossendale	Rapid City	Treherne	
Rignold	Mentmore	Clanwilliam	McCreary	MacGregor	
Howden	Oberon	Basswood		Carberry	
Springhill	Moorepark	Sidney		Gladstone	
Fairview	Beaver	Douglas		Minnedosa	
Golden Stream	Firdale	Eden		Neepawa	
Tenby	Katrime	Brookdale			
	Ingelow	Westbourne			
	Edwin	Arden			
	Justice	Glenella			
	Helston	Kelwood			
	Bethany	Plumas			
	Franklin				
	Birnie				
	Forrest				
	Macdonald				
	Wellwood				

The next group are the villages, and these are defined to be those communities having from 10 to 35 services available. This group comprises thirteen communities, ranging from Riding Mountain with 12 services to Plumas with 33. The villages tend to have all the facilities present in the hamlets plus a hardware store, an implement dealer, more than one service station, a garage, cafes, more meeting halls and recreational facilities, and a school. In some villages there is a high school as well as the elementary school.

The third group, which have been designated towns, consists of the communities of Austin, Rapid City, and McCreary, having 42, 46 and 47 services respectively. The greater activity in the towns, as compared with the lesser communities, consists of more retail stores of the same kind (e.g. 2 food outlets rather than 1), a barber shop, a health clinic, more and

better recreational facilities, more schools, water and sewer services, and a bank or credit union. Electrical appliance sales and service depots make their first appearance.

Between towns and cities in the hierarchy is a group which the authors have labelled Greater Towns. These consist of places offering more than seventy services each but which are not generally accepted to have reached the status of a city. In the Brandon-Neepawa Region this group includes Erickson (72 services), Treherne (72), MacGregor (85), Carberry (117), Gladstone (140), together with Minnedosa and Neepawa, each of which has a full range of services. Those in the latter two towns were not enumerated.

Again the greater towns have some services not to be found in the smaller places, but they also tend to have more of the same kind.

For instance, an egg grading station appears for the first time, as well as a drug store in each of the towns. Clothing stores are present in the greater towns, in some cases several in the same community. So also are automobile dealers and specialized automotive supply outlets, which were not found to be general in the towns, villages or hamlets. This is also true for liquor stores. Beauty salons appear more often in the greater towns than in the lesser communities, as do theatres, locker plants, coin laundries and car wash facilities. Here too are law offices and newspapers which are

seldom located in smaller communities.

In the public service categories there are more recreational facilities, more meeting halls, more churches, schools and each of the greater towns has a hospital. Rather than just one bank there tends to be two or more.

Brandon is a recognized city and as such no elaboration is required. It provides all the facilities needed in a large prairie city and it serves the people living within a large radius.

TABLE 2. SERVICES PRESENT IN COMMUNITIES BY RANK, 1971

SERVICES	TOO SMALL to CLASSIFY (0-2 Services)	HAMLETS (3-9 Services)												VILLAGES (10-35 Services)										TOWNS (36-70 Services)			GREATER TOWNS (71 + Services)		
																											CITIES		
Rufford																													
Colby																													
Rigaud																													
Hooden																													
Springhill																													
Fairview																													
Golden Stream																													
Tenby																													
Cordova																													
Greig																													
Mentmore																													
Oberon																													
Moorepark																													
Beaver																													
Firdale																													
Katrine																													
Inglow																													
Edwin																													
Justice																													
Helton																													
Bethany																													
Franklin																													
Burnie																													
Forest																													
Macdonald																													
Weirwood																													
Riding Mountain																													
Rosendale																													
Clawhilla																													
Basswood																													
Sidney																													
Douglas																													
Eden																													
Brookdale																													
Westbourne																													
Arden																													
Glenella																													
Kelkwood																													
Plumas																													
Austin																													
Rapid City																													
McCreary																													
Erickson																													
Therine																													
Magregor																													
Caberrey																													
Gladstone																													
Minnedosa																													
Neepawa																													
Brandon																													

*gas pumps

Farm Population

As noted in the preface to this report, the delineation of the study area was arbitrary, and no reference was made either to official crop districts or to census divisions. The study area encompasses 18 rural municipalities which are listed in Table 3. The majority of the municipalities are included in census divisions numbers 7 and 10. For purposes of this table, "farm" and "rural municipalities" are deemed to be synonymous.

All of the the municipalities showed a steady decline in farm population over the 25 year period. Although some rural municipalities showed a slight increase in the last census year, for example Elton, from 1,180 in 1961 to 1,298 in 1966, this increase is negligible when compared with the overall picture.

The percentage decrease varied from 46 per cent in the Clanwilliam Municipality to less than 5 per cent in Daly. The overall decline in the study area was 30 per cent compared with 35 per cent in the whole province.

It will be noted by checking Table 4 that the total population of the study area increased over the 25 year period, from 28,302 in 1941 to 44,014 in 1966. This comparison shows the rather sharp decline in the proportion of persons on farms and thus illustrates the familiar rural to urban trend.

TABLE 3. FARM POPULATION IN THE STUDY AREA, BY RURAL MUNICIPALITY, CENSUS YEARS 1941 TO 1966

Rural Municipalities	1941	1951	1956	1961	1966
Clanwilliam	1,194	992	893	753	639
Odanah	983	843	835	687	649
Victoria	1,165	1,036	923	872	734
Minto	1,183	1,066	983	780	736
Glenella	1,195	1,040	1,025	805	766
Cornwallis	1,066	1,072	883	853	784
Oakland	1,105	993	961	804	834
Saskatchewa	1,222	1,135	1,072	891	841
Langford	1,168	1,158	1,100	889	851
McCreary	1,684	1,403	1,295	1,015	938
Daly	995	1,010	1,002	862	953
Landsdowne	1,639	1,600	1,334	1,174	1,065
Elton	1,369	1,242	1,204	1,180	1,187
Cypress N.	1,949	1,757	1,700	1,367	1,298
Norfolk S.	2,117	1,712	1,653	1,597	1,352
Rosedale	2,588	2,180	1,949	1,719	1,552
Westbourne	2,637	2,651	2,614	2,138	1,884
Norfolk N.	2,771	2,887	2,746	2,339	2,255
Portage La Prairie	5,631	5,482	5,391	4,648	3,975
Total	33,661	31,259	29,563	25,373	23,293
Census Division #7 — Total	12,612	11,625	10,969	9,830	9,236
Census Division #10 — Total	12,570	11,488	10,787	9,155	8,314
Farm Population in Manitoba	249,599	219,233	206,729	172,946	161,662

Population of Communities

Total population of the communities in the study area increased by 64 per cent between the census years 1941 and 1966 as shown in Table 4. Twenty-one out of the total 50 communities increased in population over the 25 year period. However, the major increases in population were in the greater towns and the city of Brandon. The seven greater towns combined, increased by 40 per cent and the city (Brandon) increased by 72 per cent. The total population of these eight communities makes up 90 per cent of the 44,014 people in the study area. It must be noted however, that the city of Brandon makes up 68 per cent of the total study area population.

At the other end of the scale, total population of the communities classified as too small to classify and hamlets decreased by 50 per cent and 13 per cent respectively.

Villages combined, showed an increase in population of 12 per cent. Towns showed an increase of 27 per cent.

These data serve to illustrate the movement of people from small rural centres to larger centres.

Population by Specified Age and Sex Groups

Table 5 contains 1966 census population data for incorporated communities, rural municipalities and census divisions making up the study area. Again the authors have accepted the data for rural municipalities as being representative of the grain farm population data. In most cases the 20-24 age group is the smallest group in the under 65's. In the main, this reflects the disruption of the family group over the war years, but to some extent it may also demonstrate that young adults are more likely to have left the farm than any other group.

Men and boys outnumber women and girls in all the rural municipalities but the opposite holds for the communities, with the exception of the town of McCreary, in which males outnumber females.

As far as proportions are concerned, the effective working age group (20 to 64 years of age) shows little difference between rural farm and community dwellers. Approximately 47 per cent of the total farm population and 46 per cent of the population in the incorporated communities is of the effective working age. The comparable figure for the province is 49 per cent.

The proportion of farm dwellers in the retired age group is significantly below the proportion of retired people living in the towns, greater

TABLE 4. POPULATION OF COMMUNITIES IN THE STUDY AREA, CENSUS YEARS 1941 TO 1966

Delivery Point	1941	1951	1956	1961	1966
<i>Too Small to Classify</i>					
Rufford	11	6	—	—	—
Colby	—	—	—	—	—
Rignold	9	15	—	—	—
Howden	—	—	—	—	—
Springhill	n.a.	4	—	—	—
Fairview	—	—	4	4	—
Golden Stream	n.a.	4	2	—	—
Tenby	40	17	13	14	30
<i>Hamlets</i>					
Cordova	15	21	14	10	5
Gregg	23	33	21	21	11
Mentmore	8	7	9	—	—
Oberon	12	23	22	7	5
Moorepark	48	49	38	33	35
Beaver	15	17	21	9	—
Firdale	n.a.	2	9	17	4
Katrine	n.a.	19	16	17	8
Ingelow	n.a.	30	24	20	20
Edwin	9	16	18	17	10
Justice	44	41	45	37	24
Helston	20	24	41	31	31
Bethany	84	61	81	80	57
Franklin	98	108	91	73	62
Birnie	104	109	95	88	63
Forrest	35	36	31	31	66
Macdonald	116	122	166	118	97
Wellwood	93	97	86	73	69
<i>Villages</i>					
Riding Mountain	228	212	222	212	235
Rossendale	59	38	44	48	33
Clanwilliam	164	203	188	182	155
Basswood	129	122	114	121	117
Sidney	161	181	161	154	180
Douglas	137	170	241	289	251
Eden	147	188	169	146	140
Brookdale	78	156	128	108	104
Westbourne	106	145	161	123	149
Arden	237	191	226	188	151
Glenella	186	233	236	219	201
Kelwood	265	370	352	323	296
Plumas	213	319	340	344	356
<i>Towns</i>					
Austin	253	280	323	384	404
Rapid City	452	391	434	467	449
McCreary	424	122	563	579	578
<i>Greater Towns</i>					
Erickson	298	463	488	531	547
Treherne	519	589	551	569	614
MacGregor	551	539	611	642	742
Carberry	931	912	1,065	1,113	1,265
Gladstone	669	828	882	944	935
Minnedosa	1,636	2,085	2,306	2,211	2,305
Neepawa	2,292	2,895	3,109	3,197	3,229
<i>Cities</i>					
Brandon	17,383	20,598	24,796	28,166	29,981
Study Area Total	28,302	33,091	38,557	41,960	44,014
Province of Manitoba	729,744	776,541	850,040	921,686	963,066

n.a. : not available

Source: Statistics Canada.

TABLE 5. POPULATION, BY SPECIFIED AGE GROUPS AND SEX, OF COMMUNITIES AND RURAL MUNICIPALITIES IN THE STUDY AREA, 1966

	Total	0-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-69	70 and Over	
<i>Communities</i>													
Rapid City	T	449	37	49	54	50	10	34	48	58	42	21	46
	M	211	13	21	30	18	4	18	23	28	17	13	26
	F	238	24	28	24	32	6	16	25	30	25	8	20
Erickson	T	547	42	58	45	37	24	58	42	75	70	29	67
	M	264	15	30	26	15	13	29	22	34	32	17	31
	F	283	27	28	19	22	11	29	20	41	38	12	36
McCreary	T	578	32	51	64	64	30	30	72	63	66	26	80
	M	298	13	29	35	43	18	14	29	23	37	13	44
	F	280	19	22	29	21	12	16	43	40	29	13	36
Treherne	T	614	42	50	46	51	44	50	52	66	63	42	108
	M	285	17	23	23	27	17	24	25	30	33	13	53
	F	329	25	27	23	24	27	26	27	36	30	29	55
MacGregor	T	724	66	69	66	47	32	69	72	85	72	44	102
	M	350	40	32	34	25	12	36	32	41	33	18	47
	F	374	26	37	32	22	20	33	40	44	39	26	55
Gladstone	T	935	81	94	93	77	40	88	96	96	93	45	132
	M	454	47	50	41	34	20	45	47	36	42	24	68
	F	481	34	44	52	43	20	43	49	60	51	21	64
Carberry	T	1,265	102	91	110	116	75	116	117	154	123	56	205
	M	628	51	49	52	70	38	67	56	63	63	25	94
	F	637	51	42	58	46	37	49	61	91	60	31	111
Minnedosa	T	2,305	192	241	223	184	128	211	270	247	224	113	272
	M	1,143	101	118	119	96	71	90	141	116	100	53	138
	F	1,162	91	123	104	88	57	121	129	131	124	60	134
Neepawa	T	3,229	258	250	272	311	177	237	316	408	351	163	486
	M	1,535	137	127	134	139	91	116	145	181	168	66	231
	F	1,694	121	123	138	172	86	121	171	227	183	97	255
Brandon	T	29,981	2,822	2,828	2,681	2,627	2,247	3,402	3,612	3,520	2,587	1,035	2,620
	M	14,553	1,432	1,474	1,350	1,233	1,025	1,715	1,739	1,706	1,202	460	1,217
	F	15,428	1,390	1,354	1,331	1,394	1,222	1,687	1,873	1,814	1,385	575	1,403
<i>Rural Municipalities¹</i>													
Clanwilliam	T	771	72	95	90	79	27	58	98	101	81	39	31
	M	426	35	51	46	49	19	29	54	55	48	21	19
	F	345	37	44	44	30	8	29	44	46	33	18	12
Odanah	T	780	74	100	76	68	42	62	84	105	77	21	71
	M	411	32	53	35	39	24	33	48	50	49	11	37
	F	369	42	47	41	29	18	29	36	55	28	10	34
Langford	T	877	82	98	97	100	39	74	110	121	108	20	28
	M	451	37	50	52	39	22	38	59	61	69	10	14
	F	426	45	48	45	61	17	36	51	60	39	10	14
Minto	T	923	68	91	108	91	41	63	117	113	122	38	71
	M	504	36	50	59	55	25	33	54	58	67	28	39
	F	419	32	41	49	36	16	30	63	55	55	10	32
Oakland	T	968	95	106	104	84	45	80	118	133	121	37	45
	M	528	49	64	44	49	28	46	60	68	72	19	29
	F	440	46	42	60	35	17	34	58	65	49	18	16
Glenella	T	986	92	88	132	99	45	90	120	113	110	35	62
	M	539	43	50	72	54	27	50	64	62	59	22	36
	F	447	49	38	60	45	18	40	56	51	51	13	26
McCreary	T	1,001	92	105	112	97	37	90	127	152	100	30	59
	M	555	54	54	60	49	16	50	66	86	68	16	36
	F	446	38	51	52	48	21	40	61	66	32	14	23
Saskatchewan	T	1,047	115	119	118	97	54	86	121	135	118	25	59
	M	552	60	63	58	49	31	37	63	68	72	12	39
	F	495	55	56	60	48	23	49	58	67	46	13	20

TABLE 5. POPULATION, BY SPECIFIED AGE GROUPS AND SEX, OF COMMUNITIES AND RURAL MUNICIPALITIES IN THE STUDY AREA, 1966 (concluded)

Rural Municipalities (con't)

Lansdowne	T	1,417	147	181	179	132	60	135	163	162	128	52	78
	M	763	77	92	94	68	41	71	88	76	78	34	44
	F	654	70	89	85	64	19	64	75	86	50	18	34
Victoria	T	1,503	138	165	161	144	53	118	153	212	150	69	140
	M	806	83	89	85	76	30	59	73	118	75	35	83
	F	697	55	76	76	68	23	59	80	94	75	34	57
Elton	T	1,593	142	207	215	138	61	132	219	210	137	55	77
	M	818	63	99	106	72	35	65	100	117	82	34	45
	F	775	79	108	109	66	26	67	119	93	55	21	32
Norfolk S.	T	1,706	156	222	221	179	83	138	195	212	138	63	99
	M	895	79	113	109	94	52	66	96	118	84	32	52
	F	811	77	109	112	85	31	72	99	94	54	31	47
Cypress N.	T	2,281	165	199	223	420	188	201	244	254	174	76	137
	M	1,387	88	118	116	322	150	109	125	142	106	41	70
	F	894	77	81	107	98	38	92	119	112	68	35	67
Rosedale	T	2,643	277	277	309	258	123	229	288	315	266	102	199
	M	1,356	158	122	142	132	69	113	149	164	150	53	104
	F	1,287	119	155	167	126	54	116	139	151	116	49	95
Westbourne	T	2,814	297	325	346	284	158	253	360	329	222	78	162
	M	1,481	143	185	172	142	100	122	182	180	132	40	83
	F	1,333	154	140	174	142	58	131	178	149	90	38	79
Norfolk N.	T	3,242	367	363	387	345	158	281	353	414	300	92	182
	M	1,716	175	198	209	181	92	152	171	216	166	55	101
	F	1,526	192	165	178	164	66	129	182	198	134	37	81
Daly	T	3,696	416	657	476	375	211	465	647	213	133	38	65
	M	2,017	216	327	249	224	169	237	346	123	73	16	37
	F	1,679	200	330	227	151	42	228	301	90	60	22	28
Cornwallis	T	5,883	795	918	733	497	301	832	942	413	219	65	168
	M	3,076	391	472	366	257	139	411	502	247	140	41	110
	F	2,807	404	446	367	240	162	421	440	166	79	24	58
Portage La Prairie	T	7,481	890	983	944	688	476	785	891	780	531	188	325
	M	4,011	470	508	492	369	288	400	454	415	302	115	198
	F	3,470	420	475	452	319	188	385	437	365	229	73	127
Study Area Total	T	82,239	8,154	9,080	8,685	7,739	5,009	8,467	10,047	9,259	6,926	2,697	6,176
	M	42,013	4,155	4,711	4,410	4,020	2,666	4,275	5,013	4,682	3,619	1,337	3,125
	F	40,226	3,999	4,369	4,275	3,719	2,343	4,192	5,034	4,577	3,307	1,360	3,051
Division No. 7 and No. 10 – Total	T	71,346	6,861	7,440	7,241	6,655	4,380	7,238	8,499	8,299	6,255	2,531	5,947
	M	36,099	3,490	3,884	3,663	3,420	2,218	3,651	4,203	4,148	3,238	1,226	2,958
	F	35,247	3,371	3,556	3,578	3,235	2,162	3,587	4,296	4,151	3,017	1,305	2,989
Provincial Total	T	963,066	102,425	105,527	99,227	87,848	66,899	109,460	117,065	106,752	79,005	28,668	60,190
	M	484,266	52,476	53,862	50,701	44,404	33,787	55,255	57,765	53,162	39,881	14,059	28,915
	F	478,800	49,949	51,665	48,526	43,444	33,112	54,205	59,301	53,590	39,124	14,609	31,275

¹ Excluding all incorporated towns and villages.

T — Total

M — Male

F — Female

Source: Statistics Canada.

TABLE 6. PROPORTION OF POPULATION FALLING WITHIN THREE SPECIFIED AGE GROUPS, 1966

	Pre-School and School Age Groups (0 to 19 years)	Working Age Group (20 to 64)	Retired Age Group (65 and Over)
— percent —			
<i>Communities</i>			
Rapid City	42.3	42.8	14.9
Erickson	33.3	49.2	17.5
McCreary	36.5	45.2	18.3
Treherne	30.8	44.8	24.4
MacGregor	34.2	45.6	20.2
Gladstone	36.9	44.2	18.9
Carberry	33.1	46.3	20.6
Minnedosa	36.4	46.9	16.7
Neepawa	33.8	46.1	20.1
Brandon	36.5	51.3	12.2
<i>Rural Municipalities¹</i>			
Clanwilliam	43.6	47.3	9.1
Odanah	40.8	47.4	11.8
Langford	43.0	51.5	5.5
Minto	38.8	49.4	11.8
Oakland	40.2	51.3	8.5
Glenella	41.7	48.5	9.8
McCreary	40.6	50.5	8.9
Saskatchewan	42.9	49.1	8.0
Landsdowne	45.1	45.7	9.2
Victoria	40.5	45.6	13.9
Elton	44.1	47.6	8.3
Norfolk S.	45.6	44.9	9.5
Cypress N.	44.2	46.5	9.3
Rosedale	42.4	46.2	11.4
Westbourne	44.5	47.0	8.5
Norfolk N.	45.1	46.5	8.4
Daly	52.0	45.2	2.8
Cornwallis	50.0	46.0	4.0
Portage La Prairie	46.8	46.3	6.9
Study Area Total	40.9	48.3	10.8
Census Division No. 7 and No. 10 — Total	39.5	48.6	11.9
Provincial Total	41.0	49.8	9.2

¹ Excluding all incorporated towns and villages.

Source: Statistics Canada.

towns and cities. The respective proportions are 9 per cent on the farm and 18 per cent in the incorporated communities. The provincial figure is 9 per cent, which is close to the rural farm figure.

School Enrolment

As in the other reports published in this series it is evident that the Brandon-Neepawa area has followed the trend towards consolidating schools and locating them in larger communities. This is demonstrated in Table 7. None of the communities classified as too small to classify nor the hamlets (with the exception of Justice, Forrest and Wellwood) have schools. Only the hamlet of Forrest has a secondary school but of the 203 pupils attending, 200 are transported from the surrounding districts. The students of the two villages of Clanwilliam and Basswood attend classes in Minnedosa. Students in Sidney travel to Austin. The rest of the villages have schools up to various grades. Of the villages, only Kelwood and Plumas have high schools to grade 12.

All the towns, greater towns and Brandon have both elementary and secondary schools; however, there is not a grade 12 class in Austin.

It should be noted that there are 22 schools in the city of Brandon.

Special classes for the educable mentally handicapped are located in seven communities in the study area. The largest class is at Brandon.

Post Office Revenues

Post office revenues serve as an indicator of the socio-economic activity in a community and the area it serves. The last post office left in those communities too small to classify closed in 1967. It is interesting to note that the post office at Fairview closed in 1884. Only two Hamlets do not have a post office. All hamlet post office revenues, with the exception of Forrest, in recent years have been less than a thousand dollars and some communities, like Gregg, have experienced substantial downward trends in postal revenues. With the exception of Clanwilliam all the villages, towns, greater towns and Brandon experienced increases in postal revenue. These increases ranged from 3 per cent at Sidney to 101 per cent at McCreary. All the towns, greater towns and the city of Brandon showed substantial increases, at over 50 per cent. Brandon had the largest dollar increase from \$298,007 to \$535,666 or an 80 per cent increase.

Carload Rail Traffic

Among the indicators chosen by the authors to measure, in an ordinal sense, the economic activity of the communities is revenue carload rail

TABLE 7. SCHOOL ENROLMENT IN THE STUDY AREA, BY GRADES, SCHOOL YEAR 1970-71

	Special Classes	Kinder- garten	— Grades —												Total		
			1	2	3	4	5	6	7	8	9	10	11	12			
— enrolment —																	
<i>Too Small to Classify</i>																	
Rufford			Pupils attend Rapid City School(s)														
Colby			Pupils attend Plumas School(s)														
Rignold			Pupils attend Portage La Prairie School(s)														
Howden			Pupils attend Neepawa School(s)														
Springhill			Pupils attend Neepawa School(s)														
Fairview			Pupils attend Carberry School(s)														
Golden Stream			Pupils attend Gladstone School(s)														
Tenby			Pupils attend Plumas School(s)														
<i>Hamlets</i>																	
Cordova			Pupils attend Rapid City School(s)														
Gregg			Pupils attend Wellwood School														
Mentmore			Pupils attend Neepawa School(s)														
Oberon			Pupils attend Brookdale School(s)														
Moorepark			Pupils attend Forrest School(s)														
Beaver			Pupils attend MacGregor School(s)														
Firdale			Pupils attend Wellwood School														
Katrima			Pupils attend MacGregor School(s)														
Ingelow			Pupils attend Brookdale School(s)														
Edwin			Pupils attend Portage La Prairie School(s)														
Justice			4	5	6	4	7	4	6						36		
Helston			Pupils attend Gladstone School(s)														
Bethany			Pupils attend Minnedosa School(s)														
Franklin			Pupils attend Neepawa School(s)														
Birnie			Pupils attend Eden School														
Forrest			23	17	25	14	15	32	17	29	22	55	51	57	397		
Macdonald			Pupils attend Portage La Prairie School(s)														
Wellwood			14	8	4	11	10	9	13	9					78		
<i>Villages</i>																	
Riding Mountain			1	7	6	3	10	6							33		
Rossendale			10	23	20	23	29	23	14	20	19				181		
Clanwilliam			Pupils attend Minnedosa School(s)														
Basswood			Pupils attend Minnedosa School(s)														
Sidney			Pupils attend Austin School(s)														
Douglas			9	9	8	17	10	8	18	9					88		
Eden			22	27	42	31	34	30	26	32	23	26			293		
Brookdale			13	14	14	11	11	19	12	14	13				121		
Westbourne			4	7	7	8	3	8							37		
Arden			8	24	10	23	17	16	13	23	16				150		
Glenella			17	14	7	18	12	12	16	12	16				124		
Kelwood			10	18	10	13	15	20	18	21	26	19	40	36	283		
Plumas			33	24	22	19	24	22	23	17	27	14	22	14	285		
<i>Towns</i>																	
Austin			33	22	35	32	39	33	25	36	35	26	44	22	35	417	
Rapid City			9	13	18	20	18	23	21	16	22	15				175	
McCreary					26	28	24	27	31	26	28	22	42	31	41	361	
<i>Greater Towns</i>																	
Erickson			43	44	25	44	58	45	44	28	33	55	73	73	58	623	
Treherne					24	20	18	30	26	21	27	16	55	45	39	376	
MacGregor			28	47	56	47	59	56	50	50	53	55	53	56	46	656	
Carberry			14	37	53	58	33	47	60	47	44	56	58	42	50	636	
Gladstone				30	49	45	55	43	38	68	62	60	61	54	60	670	
Minnedosa			28	56	92	81	88	102	77	104	100	89	102	99	80	1,197	
Neepawa			32	66	76	80	71	61	80	80	72	93	94	153	119	1,183	
<i>Cities</i>																	
Brandon			158	509	667	728	649	636	630	582	597	643	665	710	650	480	8,304

Source: Manitoba Department of Youth and Education.

TABLE 8. POST OFFICE REVENUE, BY COMMUNITIES, FISCAL YEARS 1959-60 TO 1969-70

	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
— dollars —											
<i>Too Small to Classify</i>											
Rufford		No Record									
Colby		No Record									
Rignold		No Record									
Howden		Closed 1948									
Springhill		No Record									
Fairview		Closed 1884									
Golden Stream		Closed 1955									
Tenby	270	224	209	197	183	189	218	211	58	Closed 1967	
<i>Hamlets</i>											
Cordova	74	134	93	99	73	93	7	Closed 1965			
Gregg	234	236	215	189	210	203	210	201	179	158	67
Mentmore	87	112	143	113	112	128	76	27	Closed 1966		
Oberon	359	387	261	261	223	274	261	313	338	329	297
Moorepark	383	348	364	375	386	449	497	463	496	459	540
Beaver	235	213	214	214	221	322	255	254	264	265	341
Firdale	340	334	420	308	218	323	338	317	314	276	370
Katrime	251	222	257	268	213	250	239	138	165	171	233
Ingelow	165	142	136	140	162	178	204	173	150	144	130
Edwin	298	282	317	308	317	288	269	251	228	325	293
Justice	580	570	518	499	494	516	552	501	494	560	632
Helston	311	335	322	348	330	351	382	342	291	337	434
Bethany	444	405	378	331	349	344	273	264	279	311	341
Franklin	732	677	717	752	774	919	866	838	848	802	833
Birnie	808	777	734	806	855	772	786	717	664	620	666
Forrest	882	845	757	817	956	1,131	1,367	1,421	1,442	1,492	1,567
Macdonald	721	621	674	688	624	564	556	541	500	511	725
Wellwood	941	836	857	791	667	680	772	848	728	764	907
<i>Villages</i>											
Riding Mountain	1,181	1,212	1,256	1,320	1,311	1,409	1,469	1,541	1,567	1,552	1,549
Rosendale	614	651	631	660	584	703	679	651	656	635	724
Clanwilliam	1,211	1,075	1,050	1,070	1,056	1,126	1,096	1,017	887	894	990
Basswood	1,061	1,065	1,113	1,241	1,292	1,316	1,457	1,398	1,376	1,291	1,521
Sidney	1,059	1,115	1,224	1,279	1,120	1,181	1,250	1,300	1,155	1,043	1,089
Douglas	1,246	1,209	1,254	1,319	1,260	1,425	1,541	1,654	1,659	1,609	1,688
Eden	761	730	729	760	829	937	914	929	979	936	1,041
Brookdale	1,125	1,102	1,160	1,201	1,251	1,274	1,281	1,466	1,638	1,617	1,761
Westbourne	956	938	1,046	1,032	1,012	1,128	1,159	1,194	1,341	1,545	1,488
Arden	1,824	1,754	1,788	1,688	1,757	1,926	2,075	2,171	2,187	2,004	2,250
Glenella	2,395	2,418	2,287	2,278	2,336	2,302	2,316	2,174	2,337	2,398	2,468
Kelwood	2,224	2,143	2,065	2,066	2,236	2,458	2,602	2,906	2,748	2,786	2,951
Plumas	3,136	3,105	2,943	3,054	2,901	3,410	3,727	3,400	3,478	3,391	3,406
<i>Towns</i>											
Austin	2,882	3,005	3,195	3,520	3,595	3,757	3,750	3,741	3,778	3,880	4,502
Rapid City	3,652	3,685	3,857	3,794	3,736	3,981	4,248	4,205	4,053	4,468	5,221
McCreary	5,421	5,639	6,139	6,753	6,893	7,745	8,270	8,457	9,263	10,003	10,913
<i>Greater Towns</i>											
Erickson	5,603	5,695	6,199	6,397	6,763	7,475	7,627	8,356	8,614	8,681	9,903
Treherne	6,123	6,110	6,255	6,435	6,420	7,328	7,494	7,816	7,874	8,113	9,380
MacGregor	6,783	6,947	7,498	7,712	7,897	8,777	9,902	9,865	9,998	10,843	12,388
Carberry	9,499	9,526	10,491	12,222	12,678	13,445	13,899	14,627	14,928	15,959	18,547
Gladstone	10,786	10,902	11,125	11,453	11,683	13,208	12,876	14,649	16,114	17,174	20,971
Minnedosa	21,909	22,223	23,084	24,954	24,714	27,164	28,875	30,653	32,064	38,409	38,744
Neepawa	34,231	34,110	35,327	35,875	38,953	45,659	44,967	43,420	44,089	44,139	51,732
<i>Cities</i>											
Brandon	298,007	301,787	304,502	328,032	316,169	335,182	357,847	419,729	443,141	471,798	535,666

Source: Post Office Department.

traffic, in terms of the number of carloads terminating at and the number shipped from the points comprised in the study region. These data appear as a short time-series in Table 9. They cover each separate community and are broken down into four large general categories of traffic, viz: products of agriculture, mines, forests and manufactures and miscellaneous. The products of agriculture category is made up almost entirely of grain plus a very few carloads of livestock, and is virtually all outward. Indeed the preponderance of all the carload rail traffic in the area is grain and it varies with the size of the hinterland, the number of permit holders, and export marketings.

TABLE 9. CARLOAD RAIL TRAFFIC BY DELIVERY POINT IN THE STUDY AREA 1962 TO 1970

Delivery Point	1962		1963		1964		1965		1966		1967		1968		1969		1970				
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT			
— number of cars —																					
<i>Too Small to Classify</i>																					
Rufford																					
Products of Agriculture							—	49	—	49	—	29	—	8	—	—	—	22			
Products of Mines							6	—	5	—	3	—	2	—	—	—	—	—			
Products of Forests							—	—	—	—	—	—	—	—	—	—	—	—			
Manufactures & Misc.							1	—	1	—	—	—	—	—	—	—	—	—			
TOTAL	n.a.	n.a.	n.a.				7	49	6	49	3	29	2	8	—	—	—	22			
Colby																					
Products of Agriculture								—	124	—	131	—	132	—	93	—	137	—	114		
Products of Mines								—	—	—	—	—	—	—	—	—	—	1	—		
Products of Forests								—	—	—	—	—	—	—	—	—	—	—	—		
Manufactures & Misc.								—	—	—	2	—	3	—	2	—	1	—	—		
TOTAL	n.a.	n.a.	n.a.				—	124	—	131	2	132	3	93	2	137	2	114			
Rignold																					
Products of Agriculture								—	113	—	129	—	65	—	64	1	64	—	156		
Products of Mines								2	—	2	—	2	—	1	—	1	—	1	—		
Products of Forests								—	—	—	—	—	—	—	—	—	—	—	—		
Manufactures & Misc.								1	—	—	2	—	2	—	—	—	1	—	—		
TOTAL	n.a.	n.a.	n.a.				3	113	2	129	4	65	3	64	2	64	2	156			
Howden																					
Products of Agriculture								—	12	—	26	—	59	—	54	—	16	—	33	—	40
Products of Mines								—	—	—	—	—	—	—	—	—	—	—	—	—	
Products of Forests								—	—	—	—	—	—	—	—	—	—	—	—	—	
Manufactures & Misc.								—	—	—	—	—	—	—	—	—	—	—	—	—	
TOTAL	n.a.	—	12	—	26	—	59	—	54	—	34	—	16	—	33	—	40	—			
Springhill																					
Products of Agriculture								—	88	—	104	—	84	—	55	—	87	—	93	—	
Products of Mines								—	—	—	—	—	—	—	—	—	—	—	—	—	
Products of Forests								—	—	—	—	—	—	—	—	—	—	—	—	—	
Manufactures & Misc.								—	—	—	—	—	—	—	—	—	4	—	—	—	
TOTAL	n.a.	n.a.	n.a.				—	88	—	104	—	84	—	55	—	87	4	93	—		
Fairview																					
Products of Agriculture								—	121	—	124	—	113	—	77	—	75	—	155	—	
Products of Mines								—	—	—	—	—	—	—	—	—	—	—	—	—	
Products of Forests								—	—	—	—	—	—	—	—	—	—	—	—	—	
Manufactures & Misc.								—	—	—	—	—	—	—	—	—	8	—	14	—	
TOTAL	n.a.	n.a.	n.a.				—	121	—	124	—	113	—	77	8	75	14	155	—		
Golden Stream																					
Products of Agriculture								—	34	—	43	—	34	—	38	—	71	—	96	—	
Products of Mines								—	—	—	—	—	—	—	—	—	—	—	—	—	
Products of Forests								—	—	—	—	—	—	—	—	—	—	—	—	—	
Manufactures & Misc.								1	—	—	4	—	1	—	—	—	1	—	—	—	
TOTAL	n.a.	n.a.	n.a.				1	34	—	43	4	34	1	38	—	71	1	96	—		
Tenby																					
Products of Agriculture								—	57	—	66	—	36	—	43	—	41	—	85	—	
Products of Mines								—	—	—	—	—	—	—	—	—	—	—	—	—	
Products of Forests								—	—	—	—	—	—	—	—	—	—	—	—	—	
Manufactures & Misc.								1	—	2	—	3	—	1	—	1	—	—	—	—	
TOTAL	n.a.	n.a.	n.a.				1	57	2	66	3	36	1	43	1	41	—	85	—		
<i>Hamlets</i>																					
Cordova																					
Products of Agriculture								—	56	—	60	—	53	—	45	—	42	—	40	—	
Products of Mines								—	—	—	—	—	—	—	—	—	—	—	—	—	
Products of Forests								—	—	—	—	—	—	—	—	—	—	—	—	—	
Manufactures & Misc.								1	—	—	—	1	—	2	—	—	—	—	—	—	
TOTAL	n.a.	n.a.	n.a.				1	56	—	60	1	53	2	45	—	42	—	40	—		
Gregg																					
Products of Agriculture	—	94						—	93	—	93	—	97	—	63	—	79	—	109	—	
Products of Mines	—	—						—	—	—	—	—	—	—	—	—	—	—	—	—	
Products of Forests	—	—						—	—	—	—	—	—	—	—	—	—	—	—	—	
Manufactures & Misc.	1	—						2	—	1	—	1	—	1	—	1	—	—	—	—	
TOTAL	1	94	n.a.		n.a.		2	93	1	93	1	97	1	63	1	79	—	109	—		

TABLE 9. CARLOAD RAIL TRAFFIC BY DELIVERY POINT IN THE STUDY AREA 1962 TO 1970 (continued)

Delivery Point	1962		1963		1964		1965		1966		1967		1968		1969		1970	
	IN	OUT																
Mentmore																		
Products of Agriculture							—	92	—	80	—	68	—	71	—	75	—	126
Products of Mines							—	—	—	—	—	—	—	—	—	—	—	—
Products of Forests							—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.							—	—	—	—	—	—	—	—	—	—	—	—
TOTAL	n.a.		n.a.		n.a.		—	92	—	80	—	68	—	71	—	75	—	126
Oberon																		
Products of Agriculture	—	52	2	67	1	60	—	60	2	81	—	65	—	63	—	51	5	74
Products of Mines	2	—	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—
Products of Forests	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.	1	—	2	—	2	—	1	—	—	—	—	—	—	—	—	—	—	—
TOTAL	3	52	6	67	5	60	1	60	2	81	—	65	—	63	—	51	5	74
Moorepark																		
Products of Agriculture	—	55	—	87	—	87	—	96	—	99	—	65	—	76	—	81	—	109
Products of Mines	13	—	11	—	9	—	11	—	10	—	8	—	3	—	4	—	4	—
Products of Forests	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.	—	—	2	—	—	—	1	1	1	—	2	—	259	—	—	—	—	—
TOTAL	13	55	13	87	9	87	12	97	11	99	10	65	262	76	4	81	4	109
Beaver																		
Products of Agriculture							—	89	—	96	—	43	—	51	—	68	—	161
Products of Mines							—	—	1	—	1	—	—	—	—	—	—	—
Products of Forests							—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.							1	—	2	—	2	—	1	—	1	—	2	—
TOTAL	n.a.		n.a.		n.a.		1	89	3	96	3	43	1	51	1	68	2	161
Firdale																		
Products of Agriculture							—	67	—	60	—	36	—	38	—	62	—	59
Products of Mines							9	—	8	—	7	—	7	—	5	—	6	—
Products of Forests							—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.							4	1	3	—	1	—	12	—	—	—	—	—
TOTAL	n.a.		n.a.		n.a.		13	68	11	60	8	36	19	38	5	62	6	59
Katrine																		
Products of Agriculture							—	151	—	152	—	101	—	75	—	107	—	138
Products of Mines							4	—	1	—	1	—	—	—	—	—	—	—
Products of Forests							—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.							2	—	—	—	—	—	2	—	—	—	—	—
TOTAL	n.a.		n.a.		n.a.		6	151	1	152	1	101	2	75	—	107	—	138
Ingelow																		
Products of Agriculture							—	49	—	54	—	37	—	45	—	51	—	50
Products of Mines							—	—	—	—	—	—	—	3	—	4	—	—
Products of Forests							—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.							4	—	1	—	—	—	—	—	—	—	—	—
TOTAL	n.a.		n.a.		n.a.		4	49	1	54	—	37	—	45	3	51	4	50
Edwin																		
Products of Agriculture							—	93	—	96	—	73	—	59	—	68	—	99
Products of Mines							3	—	1	—	5	—	2	—	1	—	—	—
Products of Forests							—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.							—	2	1	—	5	—	66	—	—	3	—	—
TOTAL	n.a.		n.a.		n.a.		3	95	2	96	10	73	68	59	1	68	3	99
Justice																		
Products of Agriculture							—	143	—	67	—	70	—	65	—	70	—	116
Products of Mines							7	—	3	—	1	—	—	—	—	—	—	—
Products of Forests							—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.							—	—	—	—	—	—	—	—	—	—	—	—
TOTAL	n.a.		n.a.		n.a.		7	143	3	67	1	70	—	65	—	70	—	116
Helston																		
Products of Agriculture							—	146	—	121	—	96	—	145	—	141	—	115
Products of Mines							2	—	1	—	—	—	—	—	—	—	—	—
Products of Forests							—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.							—	—	—	—	—	—	—	—	—	—	—	—
TOTAL	n.a.		n.a.		n.a.		2	146	1	121	—	96	—	145	—	141	—	115

TABLE 9. CORLOAD RAIL TRAFFIC BY DELIVERY POINT IN THE STUDY AREA 1962 TO 1970 (continued)

Delivery Point	1962		1963		1964		1965		1966		1967		1968		1969		1970	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Bethany																		
Products of Agriculture							—	41	—	59	—	17	—	22	—	30	—	65
Products of Mines							—	—	—	—	1	—	—	—	—	—	—	—
Products of Forests							—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.							—	—	—	—	—	—	—	—	—	—	—	—
TOTAL	n.a.	n.a.	n.a.	n.a.	—	41	—	59	1	17	—	22	—	30	—	65		
Franklin																		
Products of Agriculture	1	106	—	—	—	135	—	190	—	131	—	77	—	68	2	85	—	118
Products of Mines	1	—	—	—	—	—	1	—	1	—	1	—	—	—	—	—	—	—
Products of Forests	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Manufactures & Misc.	1	—	—	—	—	4	1	4	5	8	3	6	—	2	—	2	—	1
TOTAL	3	106	—	—	4	136	5	195	10	134	7	77	2	68	4	85	1	119
Birnie																		
Products of Agriculture	—	2	—	10	—	63	—	84	—	87	—	70	—	66	—	71	—	71
Products of Mines	9	—	5	—	5	—	10	—	5	—	8	—	4	—	2	—	2	—
Products of Forests	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Manufactures & Misc.	—	—	2	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL	9	2	7	10	6	63	10	84	5	87	9	70	4	66	2	71	2	71
Forrest																		
Products of Agriculture	—	104	—	—	—	180	—	143	—	144	—	85	—	88	—	48	—	145
Products of Mines	1	111	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Products of Forests	3	2	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Manufactures & Misc.	18	—	—	—	—	—	1	1	—	—	—	—	—	—	1	1	—	—
TOTAL	22	217	—	—	—	181	1	144	1	144	—	85	—	88	1	49	—	145
Macdonald																		
Products of Agriculture	—	39	—	—	—	59	—	69	—	95	—	68	—	57	—	40	—	96
Products of Mines	—	—	—	—	—	—	—	—	—	—	—	—	90	—	—	—	—	—
Products of Forests	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
Manufactures & Misc.	4	1	—	—	—	—	1	—	—	—	—	—	—	1	—	2	—	—
TOTAL	4	40	—	—	—	59	1	69	—	95	—	68	91	58	—	42	—	96
Wellwood																		
Products of Agriculture	—	55	—	95	2	75	—	83	—	93	—	51	—	66	—	55	1	91
Products of Mines	15	—	11	—	11	—	11	—	7	—	4	—	—	—	—	—	—	—
Products of Forests	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.	1	—	1	—	3	—	148	—	70	1	2	—	2	—	233	—	292	—
TOTAL	16	55	12	95	16	75	159	83	77	94	6	51	2	66	233	55	293	91
Villages																		
Riding Mountain																		
Products of Agriculture	—	33	—	64	—	41	—	49	—	37	—	54	—	47	—	59	—	81
Products of Mines	5	—	7	—	6	—	10	—	7	—	4	—	1	—	—	—	—	—
Products of Forests	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.	1	—	1	—	—	—	2	—	3	—	9	—	4	1	5	—	3	—
TOTAL	6	33	8	64	6	41	12	49	10	37	13	54	5	48	5	59	3	81
Rossendale																		
Products of Agriculture							—	76	—	67	—	59	—	50	—	45	—	96
Products of Mines							11	—	8	—	8	—	4	—	5	—	3	—
Products of Forests							—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.							—	—	—	—	—	—	1	—	1	—	1	—
TOTAL	n.a.	n.a.	n.a.	n.a.	11	76	8	67	8	59	5	50	6	45	4	45		
Clanwilliam																		
Products of Agriculture	—	185	—	302	—	216	—	236	—	295	—	156	—	134	—	189	—	269
Products of Mines	24	—	27	—	23	—	17	—	14	—	14	—	11	—	13	—	9	—
Products of Forests	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.	4	—	6	—	4	—	3	—	1	—	4	—	—	—	—	—	1	—
TOTAL	28	185	33	302	27	216	20	236	15	295	18	156	11	134	13	189	10	269
Basswood																		
Products of Agriculture	—	139	—	—	—	160	—	151	1	215	—	133	—	107	—	98	—	213
Products of Mines	12	—	—	—	9	—	9	—	7	—	7	—	3	—	1	—	—	—
Products of Forests	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.	—	—	—	—	2	1	2	—	1	—	—	—	—	—	—	—	—	—
Animals & Products	—	1	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—
TOTAL	12	140	—	—	11	162	11	152	9	215	7	134	3	107	1	98	—	213

TABLE 9. CARLOAD RAIL TRAFFIC BY DELIVERY POINT IN THE STUDY AREA 1962 TO 1970 (continued)

Delivery Point	1962		1963		1964		1965		1966		1967		1968		1969		1970	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Sidney																		
Products of Agriculture	—	37	—	—	—	43	—	45	—	60	—	32	—	38	—	53	—	73
Products of Mines	16	—	—	—	13	—	16	—	13	—	11	—	8	—	6	—	8	—
Products of Forests	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.	39	1	—	—	25	2	18	7	6	—	7	—	7	2	5	1	4	—
Animals & Products	1	1	—	—	—	3	—	1	—	—	—	—	—	—	—	—	—	1
TOTAL	56	39	—	—	38	48	34	53	19	60	18	32	15	40	11	54	12	74
Douglas																		
Products of Agriculture	—	40	—	—	—	49	1	92	—	109	—	72	—	67	—	73	2	133
Products of Mines	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
Products of Forests	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Manufactures & Misc.	5	—	—	—	—	—	—	—	—	—	—	—	—	—	3	1	—	—
Animals & Products	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	2
TOTAL	5	40	—	—	—	49	2	94	—	110	—	72	—	70	1	73	2	135
Eden																		
Products of Agriculture	—	—	—	28	—	149	—	213	—	208	—	167	—	145	—	180	—	209
Products of Mines	12	—	15	—	14	—	15	—	12	—	15	—	8	—	9	—	6	—
Products of Forests	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—
Manufactures & Misc.	—	—	2	—	3	—	7	—	5	—	8	—	3	—	1	—	3	—
TOTAL	12	—	17	28	17	149	23	213	17	208	23	167	11	145	11	180	9	209
Brookdale																		
Products of Agriculture	1	167	2	265	2	219	—	262	3	258	1	240	—	148	—	158	—	225
Products of Mines	23	—	22	—	15	—	16	—	14	—	13	—	5	—	1	—	4	—
Products of Forests	3	—	1	—	2	—	1	—	1	—	—	—	—	—	—	—	—	—
Manufactures & Misc.	47	—	46	—	10	—	13	—	18	—	14	2	7	—	3	—	3	—
TOTAL	74	167	71	265	29	219	30	262	36	258	28	242	12	148	4	158	7	225
Westbourne																		
Products of Agriculture	—	37	—	—	—	61	—	129	—	122	2	60	—	75	—	90	—	88
Products of Mines	13	—	—	—	7	—	5	—	3	—	2	—	—	—	—	2	—	—
Products of Forests	—	—	—	—	—	—	—	—	—	—	—	—	2	—	1	—	—	—
Manufactures & Misc.	9	—	—	—	11	—	24	1	43	—	55	8	34	—	37	—	21	—
TOTAL	22	37	—	—	18	61	29	130	46	122	59	68	36	75	38	90	23	88
Arden																		
Products of Agriculture	—	137	—	—	—	121	—	165	—	188	—	132	—	102	—	111	—	157
Products of Mines	3	—	—	—	5	—	4	—	6	—	3	—	7	—	6	—	4	1
Products of Forests	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—
Manufactures & Misc.	1	—	—	—	2	—	2	1	5	1	9	1	7	—	2	5	278	5
TOTAL	4	137	—	—	7	121	6	166	11	189	12	133	14	102	10	116	282	163
Glenella																		
Products of Agriculture	6	112	—	196	1	147	—	166	—	160	—	119	—	121	—	220	—	185
Products of Mines	20	—	17	—	15	—	16	—	12	—	9	—	7	—	5	—	3	—
Products of Forests	7	—	9	—	8	—	8	—	2	—	5	—	1	—	3	—	3	—
Manufactures & Misc.	27	—	31	—	10	—	12	2	13	4	9	1	7	—	12	—	10	—
TOTAL	60	112	57	196	34	147	36	168	27	164	23	120	15	121	20	220	16	185
Kelwood																		
Products of Agriculture	—	116	—	233	—	158	—	174	—	158	—	112	—	102	—	127	—	127
Products of Mines	29	—	26	—	24	—	24	—	24	—	19	—	14	—	12	—	9	—
Products of Forests	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.	1	—	5	—	9	—	2	—	5	—	3	—	1	—	2	—	4	—
TOTAL	30	116	31	233	33	158	26	175	29	158	22	112	15	102	14	127	13	127
Plumas																		
Products of Agriculture	1	112	5	142	—	118	—	214	1	192	—	159	—	139	—	185	—	207
Products of Mines	28	—	21	—	23	—	29	—	30	—	22	—	21	—	15	—	16	—
Products of Forests	3	—	3	—	4	—	2	—	5	—	2	—	1	—	4	—	4	—
Manufactures & Misc.	27	—	25	—	10	—	11	—	10	—	17	—	10	—	5	—	6	—
TOTAL	59	112	54	142	37	118	42	214	46	192	41	159	32	139	24	185	26	207
Towns																		
Austin																		
Products of Agriculture	3	92	—	n.a.	—	120	1	146	—	171	—	121	—	102	—	111	—	158
Products of Mines	32	—	23	—	16	—	14	—	10	—	7	—	6	—	4	—	—	—
Products of Forests	—	—	—	—	—	—	2	—	2	—	—	—	2	—	—	—	—	—
Manufactures & Misc.	2	—	4	—	9	—	12	2	12	1	7	—	2	5	278	5	—	—
TOTAL	37	92	n.a.	27	120	26	146	28	173	24	122	14	102	10	116	282	163	—

TABLE 9. CARLOAD RAIL TRAFFIC BY DELIVERY POINT IN THE STUDY AREA 1962 TO 1970 (continued)

Delivery Point	1962		1963		1964		1965		1966		1967		1968		1969		1970	
	IN	OUT																
Rapid City																		
Products of Agriculture	—	118	—	226	—	185	1	183	1	231	—	161	—	131	1	138	—	212
Products of Mines	31	—	32	—	25	—	24	—	22	—	17	—	16	—	12	—	10	—
Products of Forests	4	—	1	—	3	—	1	—	—	—	—	—	—	—	—	—	—	—
Manufactures & Misc.	6	—	15	—	16	6	17	1	9	4	17	1	122	6	4	—	6	—
TOTAL	41	118	48	226	44	191	43	184	32	235	34	162	138	137	17	138	16	212
McCreary																		
Products of Agriculture	4	135	4	279	4	192	4	239	4	225	—	179	2	141	—	247	—	297
Products of Mines	21	—	20	—	20	—	23	—	22	—	17	—	13	—	12	—	11	—
Products of Forests	8	—	4	—	2	—	5	—	11	—	2	—	2	—	2	—	—	—
Manufactures & Misc.	24	—	23	—	14	—	23	6	22	3	22	—	12	1	11	—	2	—
TOTAL	57	135	51	279	40	192	55	245	59	228	41	179	29	142	25	247	13	297
Greater Towns																		
Erickson																		
Products of Agriculture	8	150	10	250	9	173	5	119	6	233	6	171	10	117	6	263	5	391
Products of Mines	38	—	32	—	27	—	26	—	24	—	20	—	18	—	17	—	15	—
Products of Forests	5	—	4	1	4	—	6	—	2	—	4	—	3	—	3	1	1	1
Manufactures & Misc.	100	3	130	1	85	4	90	3	71	5	43	4	46	4	68	3	17	—
TOTAL	151	153	176	252	125	177	127	122	103	238	73	175	77	121	94	267	38	392
Treherne																		
Products of Agriculture	3	191	—	—	1	240	2	293	3	385	3	171	—	180	—	222	—	400
Products of Mines	—	—	—	—	41	—	38	—	28	—	24	—	22	—	23	—	17	—
Products of Forests	—	—	—	—	7	—	9	—	8	—	8	—	4	—	7	—	6	—
Manufactures & Misc.	—	2	—	—	74	—	58	1	51	—	52	1	54	2	32	—	26	—
TOTAL	3	193	—	—	123	240	107	294	90	385	87	172	80	182	62	222	49	400
MacGregor																		
Products of Agriculture	—	117	—	—	—	122	1	163	—	195	—	136	—	134	—	119	—	202
Products of Mines	59	—	—	—	54	—	56	—	50	—	42	1	28	—	28	—	26	2
Products of Forests	14	—	—	—	9	—	12	—	18	5	12	—	24	—	8	—	10	—
Manufactures & Misc.	141	3	—	—	134	3	138	—	120	1	95	3	85	3	68	—	34	7
Animals & Products	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
TOTAL	214	120	—	—	197	125	207	163	188	201	149	141	137	137	104	119	70	211
Carberry																		
Products of Agriculture	44	65	—	—	1	63	10	102	3	123	—	86	8	63	—	72	—	108
Products of Mines	43	4	—	—	14	—	12	—	11	—	55	—	7	—	7	—	12	—
Products of Forests	7	—	—	—	4	—	4	—	11	—	6	—	2	—	1	—	4	—
Manufactures & Misc.	80	4	—	—	48	9	49	44	55	45	36	32	34	38	20	87	67	73
Animals & Products	2	—	—	—	—	1	—	5	2	8	—	—	—	—	1	—	1	—
TOTAL	176	73	—	—	67	73	75	151	82	176	97	118	51	101	28	160	83	182
Gladstone																		
Products of Agriculture	1	64	—	—	—	19	—	71	—	44	—	15	—	45	—	41	—	89
Products of Mines	15	—	—	—	12	—	12	—	5	—	8	—	7	—	14	—	8	—
Products of Forests	8	—	—	—	4	—	10	—	6	—	8	—	3	—	6	—	6	—
Manufactures & Misc.	99	2	—	—	32	—	45	—	122	1	77	—	19	1	9	—	3	1
Animals & Products	—	—	—	—	—	1	—	3	—	29	—	30	—	46	—	20	—	21
TOTAL	123	66	—	—	48	20	67	74	133	74	93	45	29	92	29	61	17	111
Minnedosa																		
Products of Agriculture	—	138	—	—	10	165	—	184	2	252	3	197	9	149	—	143	1	476
Products of Mines	127	1	—	—	95	—	102	—	80	—	72	—	59	—	50	—	52	1
Products of Forests	20	—	—	—	21	1	19	—	12	—	21	—	18	—	5	—	13	—
Manufactures & Misc.	168	2	—	—	220	7	187	13	197	4	192	9	109	6	109	6	112	1
Animals & Products	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
TOTAL	315	141	—	—	346	173	308	197	291	256	289	206	195	155	164	149	178	478
Neepawa																		
Products of Agriculture	6	58	—	—	4	60	8	97	6	85	1	76	—	77	—	90	—	126
Products of Mines	31	176	—	—	30	77	37	62	29	49	24	28	7	22	5	20	4	—
Products of Forests	50	—	—	—	28	—	19	—	22	—	28	—	21	—	14	—	19	—
Manufactures & Misc.	112	32	—	—	86	—	85	11	55	11	43	6	38	2	20	4	7	—
Animals & Products	—	1	—	—	—	1	—	2	—	—	—	—	—	—	—	—	—	—
TOTAL	199	267	—	—	148	138	149	172	112	145	96	110	66	101	39	114	30	126

TABLE 9. CARLOAD RAIL TRAFFIC BY DELIVERY POINT IN THE STUDY AREA 1962 TO 1970 (concluded)

Delivery Point	1962		1963		1964		1965		1966		1967		1968		1969		1970	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
<i>Cities</i>																		
Brandon																		
Products of Agriculture	252	439	—	—	279	492	237	641	202	582	245	382	208	312	171	517	130	664
Products of Mines	1,930	27	—	—	1,745	16	2,182	—	971	2	806	—	2,439	291	822	1	6,648	—
Products of Forests	209	3	—	—	215	1	196	1	218	—	241	1	188	—	143	—	138	2
Manufactures & Misc.	710	693	—	—	843	602	1,163	440	1,224	371	1,069	583	1,085	1,220	1,662	1,268	906	1,509
Animals & Products	38	446	—	—	20	463	3	437	28	539	58	607	30	419	19	321	9	446
TOTAL	3,139	1,608	—	—	3,102	1,574	3,781	1,519	2,643	1,494	2,419	1,573	3,950	2,242	2,817	2,107	7,831	2,621
Products of Agriculture —	All grains, seeds, flour, hay and straw, fruit and vegetables, etc.																	
Products of Mines —	Coal, mineral ores and concentrates, cement, brick, asphalt, etc.																	
Products of Forests —	Logs, lumber, all processed natural wood, plywood, shingles etc.																	
Manufactures and Miscellaneous —	Petroleum products, chemicals, fertilizers, machinery and part, vehicles, furniture, food and feed products, etc.																	
Animals and Products —	All livestock, poultry, meats, fish, dairy products, etc.																	

N.A. — Not available

Source: Canadian Pacific Railways
Canadian National Railways

Property Tax Assessments

Table 10 presents details of tax assessment for each of the fifty grain-delivery points in the Brandon-Neepawa study area. These are the assessments for a recent year, usually 1971. The data is not intended to be a comprehensive description of the property tax assessment characteristics of the communities. Rather, the intent is to demonstrate, in a general way, the relative importance of railways and railway associated plant to a community's tax base.

The percentage that the assessment of railway right-of-way property (including trackage, warehouses, bulk oil tanks, grain elevators, etc.) is of the centre's total assessment is used in this report to convey this relationship. Generally the smaller the community is the more does it rely on right-of-way property for its tax base. The very small communities rely virtually 100 per cent on such assessments. Seventy percent of the tax base in the hamlets, 30 per cent in the villages, 12 per cent in the towns, and 12 per cent in the greater towns is comprised of railway associated assessment. In the city of Brandon the percentage is only 2 per cent.

This negative relationship between size of community and the railway associated proportion of total property tax assessment is, of course, a reflection of the greater diversity of economic activity in the larger centres.

In the province there is a statutory assessment on railway trackage. It is based on a sliding scale as follows: in rural municipalities, \$2,000 per mile; in villages, \$3,000; in towns, \$5,000; and in cities, \$6,000 per mile. On other trackage, i.e., non right-of-way, the statutory assessment is \$1,000 per mile.

Those communities situated on two railway lines have a resulting relatively higher railway property assessment. Examples are Rapid City, Carberry, Gladstone, and Neepawa.

A clear pattern of carloads shipped, in relation to size of community, is not too discernible. In general however, the greater the number of services and people the more freight traffic is generated, although the progression is not constant. For instance three points which are considered to be too small to classify, viz: Colby, Rignold and Fairview in some years ship out more carloads than most of the hamlets and some of the villages. Light traffic generators relative to their size include such points as Neepawa, Gladstone, Kelwood, Westbourne and Sidney.

An anomalous situation existed in 1968 at Moorepark, in 1969 and 1970 at Wellwood, in 1970 at Arden and Austin, when inordinate numbers of inbound carloads terminated at these points. The explanation is that this unusual traffic consisted of pipes and coating material for pipes for construction of a pipeline in the area. This, of course, is a one-time phenomenon.

TABLE 10. PROPERTY TAX ASSESSMENT FOR COMMUNITIES IN THE STUDY AREA

	Too Small to Classify						Hamlets				
	Rufford	Colby	Rignold	Howden	Springhill	Fairview	Golden Stream	Tenby	Cordova	Gregg	Mentmore
<i>Right-of-Way Properties</i>											
a) Railways											
Land	600	290	1,330	280	450	690	530	210	900	2,520	470
Roadway	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Other Land	—	—	—	—	—	—	—	—	—	—	—
Other Trackage	420	890	—	230	230	960	—	810	380	—	380
Buildings	—	—	—	160	—	—	220	70	470	1,090	—
Business	—	—	—	—	—	—	—	—	—	—	—
b) Other ROW Occupancies											
Taxable Land	70	60	50	70	150	770	590	20	140	90	60
Taxable Buildings	5,970	12,870	16,780	6,720	17,660	20,050	11,050	10,350	7,790	18,810	11,600
Taxable Business	1,050	1,500	1,680	1,320	2,430	2,970	1,140	1,740	1,380	2,790	1,620
Total Right-of-Way Assessment	9,110	16,610	20,840	9,780	21,920	26,440	14,530	14,200	12,060	26,300	15,130
<i>Non Right-of-Way Properties</i>											
Taxable Land	50	—	—	40	50	210	30	2,310	160	—	10
Taxable Buildings	670	—	—	—	—	2,840	—	6,180	970	—	—
Taxable Business	—	—	—	—	—	—	—	—	—	—	—
Total Non Right-of-Way Assessment	720	—	—	40	50	3,050	30	8,490	1,130	—	10
Total Assessment	9,830	16,610	20,840	9,820	21,970	29,490	14,560	22,690	13,190	26,300	15,140
Right-of-Way Assessment as a Percent of Total Assessment	92.7	100.0	100.0	99.6	99.8	89.7	99.8	62.6	91.4	100.0	99.9

(continued)

TABLE 10. PROPERTY TAX ASSESSMENT FOR COMMUNITIES IN THE STUDY AREA (continued)

	Villages (con't)					Towns				
	Eden	Brookdale	Westbourne	Arden	Glenella	Kelwood	Plumas	Austin	Rapid City	McCreary
<i>Right-of-Way Properties</i>										
a) Railways										
Land	790	—	870	1,250	750	1,030	880	2,130	n.a.	1,100
Roadway	1,000	1,000	1,000	1,000	1,000	1,000	1,000	2,000	n.a.	2,000
Other Land	—	—	—	—	—	—	—	—	n.a.	—
Other Trackage	280	330	1,790	880	930	510	1,280	1,000	n.a.	1,350
Buildings	80	—	630	4,500	3,310	1,460	4,120	140	17,290	4,560
Business	—	—	—	240	240	180	90	300	330	390
b) Other ROW Occupancies										
Taxable Land	670	700	220	250	210	680	610	870	n.a.	n.a.
Taxable Buildings	33,810	40,990	21,880	18,900	18,050	24,740	32,270	18,620	40,830	26,790
Taxable Business	5,700	6,600	2,970	3,060	2,790	4,470	4,590	1,360	5,550	n.a.
Total Right-of-Way Assessment	42,330	49,620	29,360	30,080	27,280	34,070	44,840	26,420	64,000	36,190
<i>Non Right-of-Way Properties</i>										
Taxable Land	8,000	3,160	12,920	11,910	12,750	34,380	32,310	30,000	n.a.	n.a.
Taxable Buildings	54,600	48,170	55,070	65,910	117,720	137,280	267,830	237,290	n.a.	n.a.
Taxable Business	990	1,080	3,060	2,110	6,600	3,810	8,970	19,340	n.a.	n.a.
Total Non Right-of-Way Assessment	63,590	52,410	71,050	79,930	137,070	175,470	309,110	286,630	245,620	482,620
Total Assessment	105,920	102,030	100,410	110,010	164,350	209,540	353,950	313,050	309,620	518,810
Right-of-Way Assessment as a Percent of Total Assessment	40.0	48.6	29.2	27.3	16.6	16.3	12.7	8.4	20.7	7.0

(continued)

TABLE 10. PROPERTY TAX ASSESSMENT FOR COMMUNITIES IN THE STUDY AREA (continued)

	Oberon	Moorepark	Beaver	Firdale	Katrine	Ingelow	Edwin	Justice	Heilston	Bethany	Franklin	Hamlets (con't)
<i>Right-of-Way Properties</i>												
a) Railways												
Land	340	1,300	870	1,490	500	1,590	610	820	410	380	480	
Roadway		1,000	—	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
Other Land	—	—	—	—	—	—	—	—	—	—	—	
Other Trackage	860	420	—	2,880	800	—	—	—	760	290	260	920
Buildings	—	—	—	1,270	1,820	1,980	—	950	—	130	660	
Business	—	—	—	—	—	—	—	180	—	—	—	
b) Other ROW Occupancies												
Taxable Land	20	370	190	40	350	100	40	210	40	160	290	
Taxable Buildings	16,290	16,830	10,800	14,670	26,170	12,150	10,400	24,980	18,620	7,540	37,170	
Taxable Business	2,250	2,820	1,080	2,400	3,810	1,770	—	3,210	2,370	1,260	5,880	
Total Right-of-Way Assessment	20,760	22,740	12,940	23,750	34,450	18,590	12,050	32,110	22,730	10,730	46,400	
<i>Non Right-of-Way Properties</i>												
Taxable Land	2,280	1,000	270	100	200	340	200	1,010	200	2,640	1,750	
Taxable Buildings	6,410	7,500	3,500	2,420	3,600	2,060	11,560	13,390	3,720	20,790	12,550	
Taxable Business	—	90	390	—	360	—	—	720	300	540	360	
Total Non Right-of-Way Assessment	8,690	8,590	4,160	2,520	4,160	2,400	11,760	15,120	4,220	23,970	14,660	
Total Assessment	29,450	31,330	17,100	26,270	38,610	20,990	23,810	47,230	26,950	34,700	61,060	
Right-of-Way Assessment as a Percent of Total Assessment	70.5	72.6	75.6	90.4	89.2	88.6	50.6	68.0	84.3	30.9	76.0	(continued)

TABLE 10. PROPERTY TAX ASSESSMENT FOR COMMUNITIES IN THE STUDY AREA (continued)

	Hamlets (con't)				Villages				
	Birnie	Forrest	Macdonald	Wellwood	Riding Mountain	Rossendale	Clanwilliam	Basswood	Sidney
<i>Right-of-Way Properties</i>									
a) Railways									
Land	600	490	1,040	1,200	1,000	—	830	780	840
Roadway	1,000	1,000	1,000	1,000	290	1,000	1,000	1,000	1,530
Other Land	230	370	—	—	—	—	—	—	50
Other Trackage	—	760	—	440	270	—	400	880	—
Buildings	60	5,510	530	—	1,670	20	1,970	410	1,210
Business	—	330	—	—	—	—	—	—	240
b) Other ROW Occupancies									
Taxable Land	130	390	80	160	290	270	600	520	310
Taxable Buildings	9,060	32,540	22,900	16,660	11,450	7,000	39,490	45,180	11,140
Taxable Business	1,530	4,590	—	3,420	1,920	680	7,050	7,410	660
Total Right-of-Way Assessment	12,610	45,980	25,550	22,880	17,600	8,260	51,340	56,180	15,160
<i>Non Right-of-Way Properties</i>									
Taxable Land	2,830	3,920	not available	4,340	19,200	1,650	6,770	5,320	7,240
Taxable Buildings	21,140	37,220	—	26,480	105,650	12,230	43,270	35,460	53,300
Taxable Business	300	—	—	700	1,950	1,150	1,500	1,560	3,180
Total Non Right-of-Way Assessment	24,270	41,140	43,930	31,520	126,800	15,030	51,540	42,340	63,720
Total Assessment	36,880	87,120	69,480	54,400	144,400	23,290	102,880	98,520	78,880
Right-of-Way Assessment as Percent of Total Assessment	34.2	52.8	36.8	42.0	12.2	35.5	49.9	57.0	19.2
									24.6

(continued)

TABLE 10. PROPERTY TAX ASSESSMENT FOR COMMUNITIES IN THE STUDY AREA (concluded)

	Erickson	Treherne	MacGregor	Carterberry	Gladstone	Minnedosa	Neepawa	Cities Brandon
	Greater Towns							
<i>Right-of-Way Properties</i>								
a) Railways								
Land	1,790	2,890	5,560	7,680	5,860	15,990	32,700	91,090
Roadway	3,000	2,280	3,030	13,390	13,000	27,500	18,000	55,800
Other Land	—	—	—	—	670	50	380	146,730
Other Trackage	280	950	2,380	—	2,260	8,870	5,920	68,290
Buildings	3,180	6,890	3,340	8,480	9,530	18,130	12,220	198,880
Business	270	1,140	800	—	780	810	1,620	n.a.
b) Other ROW Occupancies								
Taxable Land	6,880	9,540	6,930	8,830	8,380	47,770	29,890	n.a.
Taxable Buildings	69,420	84,500	73,120	26,920	109,600	152,430	100,470	n.a.
Taxable Business	11,550	13,230	3,750	5,620	14,610	21,940	10,800	n.a.
Total Right-of-Way Assessment	96,370	121,420	98,910	70,920	164,690	293,490	212,000	n.a.
<i>Non Right-of-Way Properties</i>								
Taxable Land	90,750	155,130	1/	222,810	88,240	369,190	500,450	n.a.
Taxable Buildings	314,380	605,680	876,380	1,286,090	536,440	2,032,730	3,061,760	n.a.
Taxable Business	30,030	28,620	31,910	36,750	47,370	176,910	245,260	n.a.
Total Non Right-of-Way Assessment	435,160	789,430	908,290	1,545,650	672,050	2,578,830	3,807,470	n.a.
Total Assessment	531,530	910,850	1,007,200	1,616,570	836,740	2,872,320	4,019,470	63,420,750
Right-of-Way Assessment as a Percent of Total Assessment	18.1	13.3	9.8	4.5	19.7	10.3	5.3	n.a.

Railway Freight Traffic Density

For purposes of internal management the railway companies keep detailed records showing the number of tons of revenue freight traffic on every mile of trackage in each year.

The railway companies have supplied us with their information for 1968 and some of it, in map form, is presented in Figure A. This covers the rail network in the study area.

The data are measured in thousand net (contents only) tons per mile of line and a perusal of the map would indicate on which lines the heavy through traffic moves and where traffic is light. Some transport people attempt to gauge the profitability of a line by its traffic density, or the usefulness of a track by the traffic generated on that extent of line. This is not a hard and firm concept. For instance there is no indication whatsoever in these data as to the mix of traffic, or the freight rates charged. However, with its weakness admitted, the map in Figure A is coded to show those lines where the freight traffic density is less than 100,000 net tons per mile of road (the thick lines on the map) and those where it is more than 100,000 (the thin lines).

The density ranges all the way from zero (that is, no traffic at all in 1968) on the 23 miles between Carberry Junction and Muir on the CNR Neepawa subdivision, to over 9 million net tons per mile of line on the Rivers subdivision of the CNR's main line between Petrel Jct. and Portage la Prairie. This is the famed "alphabet line" that was originally built as the Grand Trunk Pacific. Unfortunately this figure does not show on the map in Figure A.

Other very low density lines are:

the CP Rail Varcoe subdivision between
MacGregor and Varcoe - 1,000 net tons per mile

the CNR Neepawa subdivision between
Neepawa Junction, near McCreary, and Rossburn Junction, north of
Neepawa - 22,000 net tons per mile

the CNR Pleasant Point subdivision, eastern
portion between Brandon Junction and Portage la Prairie, through
Rossendale - 39,000 net tons per mile

the CP Rail Miniota subdivision between
Varcoe and Brandon - 81,000 net tons per mile.

The CNR Pleasant Point subdivision is an interesting example of the use of rail lines. Management has decided to use only the western part of this line to handle through traffic rather than routing it all the way on this subdivision into Portage la Prairie. Thus the routing now is from Brandon to Brandon Junction (south of Carberry), north through the town of Carberry to Petrel Junction, a little west of Gregg, where it is passed to the main line for movement westward or eastward - mainly the latter.

Within the study region all of the local branch lines are low density. Only the through lines and the connecting lines carry over 100,000 net tons per mile of line.

TABLE 11. RAIL FREIGHT DENSITY ON LINES WITHIN THE STUDY AREA, 1963, 1966 AND 1968

Railway Subdivision	Year	From	To	000's Net Tons Per Mile of Road	Miles
<i>Canadian National</i>					
Gladstone	1963	Portage La Prairie	McCreary	4,495	84
	1966	Portage La Prairie	Neepawa Junction	3,456	83
	1966	Neepawa Junction	McCreary	3,468	1
	1968	Portage La Prairie	Neepawa Junction	2,659	83
	1968	Neepawa Junction	McCreary	2,674	1
Neepawa	1963	Muir	Neepawa Junction	61	71
	1966	Muir	Carberry Junction	0	24
	1966	Carberry Junction	Neepawa	189	9
	1966	Neepawa	Rosburn Junction	160	5
	1966	Rosburn Junction	Neepawa Junction	32	33
	1968	Muir	Carberry Junction	0	24
	1968	Carberry Junction	Rosburn Junction	126	14
	1968	Rosburn Junction	Neepawa Junction	22	33
Rosburn	1963	Rosburn Junction	Erickson	112	32
	1966	Rosburn Junction	Erickson	128	32
	1968	Rosburn Junction	Erickson	79	32
Rapid City	1963	Hallboro Junction	Rapid City	47	27
	1966	Hallboro Junction	Rapid City	49	27
	1968	Hallboro Junction	Rapid City	41	27
Harte	1963	Not Available	Junction of C.N. Lines	8,831	49
	1966	Portage La Prairie	Rivers	7,844	39
Rivers	1966	Junction of C.N. Lines	Rivers	9,030	88
Carberry	1963	Brandon Junction	Carberry Junction	134	22
	1966	Brandon Junction	Junction of C.N. Lines	1,088	16
	1966	Junction of C.N. Lines	Carberry Junction	136	6
	1968	Brandon Junction	Junction of C.N. Lines	1,428	16
	1968	Junction of C.N. Neepawa and Carberry Lines	Carberry Junction	128	6
Pleasant Point	1963	Portage La Prairie	Brandon	2,087	81
	1966	Portage La Prairie	Brandon Junction	1,636	53
	1968	Portage La Prairie	Brandon Junction	39	53
<i>Canadian Pacific</i>					
Minnedosa	1963	Portage La Prairie	Minnedosa	2,464	78
	1966	Portage La Prairie	Minnedosa	3,687	78
	1968	Portage La Prairie	Minnedosa	3,157	78
Bredenbury	1963	Minnedosa	Basswood	2,232	10
	1966	Minnedosa	Basswood	3,458	10
	1968	Minnedosa	Basswood	3,033	10
Varcoe	1963	MacGregor	Varcoe	29	56
	1966	MacGregor	Varcoe	8	56
	1968	MacGregor	Varcoe	1	56
Rapid City	1963	Brandon	Varcoe	100	24
	1966	Not Available			
Miniota	1968	Brandon	Varcoe	81	24
Carberry	1963	Portage La Prairie	Brandon	7,778	77
	1966	Portage La Prairie	Brandon	11,511	77
	1968	Portage La Prairie	Brandon	6,911	77
Glenboro	1963	Rathwell	Treherne	726	7
	1966	Rathwell	Treherne	1,230	7
	1968	Rathwell	Treherne	509	7

RAILWAY FREIGHT DENSITY, BRANDON-NEEPAWA REGION 1968

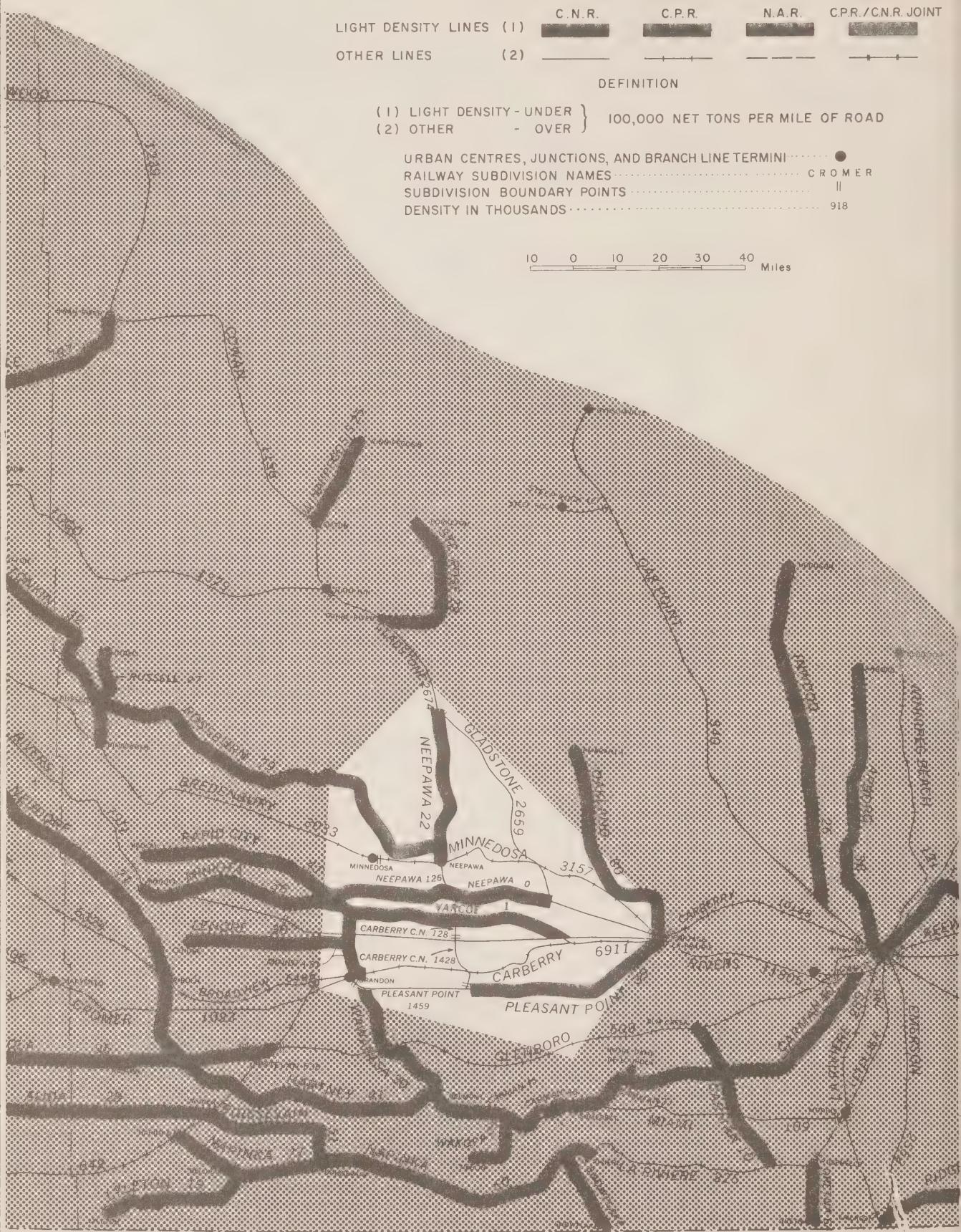


FIGURE A

PART II

AGRICULTURAL CHARACTERISTICS

Soil Capability for Agriculture

The Brandon-Neepawa study region comprises over 3,500 square miles of the central part of southern Manitoba. It is bisected north to south by an escarpment that marks the transition from the first prairie steppe to the second. As would be expected, the transitional area is characterized by a mix of soils and hence of soil capability for agriculture.

Excellent descriptions of the soils of the area are contained on the reverse of the Canada Land Inventory Soil Capability Map which is enclosed in a pocket inside the back cover of this report. It is recommended that this be read thoroughly in order that a proper appreciation of the region may be acquired.

The elevation ranges from a little less than nine hundred feet above sea level in the eastern part of the region to over 2,000 feet in the west. Spot elevations of 888 feet at Gladstone, 1,211 feet at Neepawa, and 2,050 feet at Erickson illustrate the rather sharp rise across the study region. McCreary, in the northern apex of the region, is 991 feet above sea level.

Virtually all of the study area lies within the Black Soil Zone. The predominant soils are Chernozemic, with some Gleysolic soils in the Westbourne-Gladstone lowland area. (See the aerial photograph description, Figure B). A body of peatland, partly within the region, lies north of Gladstone.

On the eastern side of the escarpment the predominant soil class is a mixture of 3 and 4 in the proportion of 8 to 2. The predominant downgrading factors are stoniness and excessive water. On the eastern border, in an arc passing through Gladstone, Katrime, and

Rignold, is a band of class 2 soil, limited only by excessive water. As already noted the transitional area is a mixture of soils and soil classes, ranging from class 7 all the way to class 1. The latter is a band of farmland running from Carberry northwards to Wellwood, and includes some 40 square miles, situated on a plateau at the 1,200 foot level. The western part of the region is situated on the higher land of the Second Prairie Steppe, and the predominant soil class 2 mixed with 6 in the proportions of about 7 to 3. Here the downgrading factors are the hilly topography and some excess water problems. Neither are too severe to preclude grain production.

The region is drained by the Whitemud River in the east, the Minnedosa in the west and the Assiniboine River across the southern base.

While not outstanding, the soils of the Brandon-Neepawa study region are relatively satisfactory for cereal grain production. Good yields of wheat, oats and barley are obtained, especially on the class 2 soils of the Second Steppe in the western half of the region.

The Carberry Sand Hills, an area of post-glacial sand dune formations mostly south of Carberry including almost all of the Spruce Woods Provincial Park are located in the extreme south-central part of the study area. They constitute a most interesting anomaly. These dunes are generally overgrown with vegetation, typically mixed-grass prairie, white spruce, and aspen poplar. North of the Assiniboine River and west of highway 258 is an unusual area of active sand dunes that form the Bald Head Hills. The flora of the Carberry Sand Hills is a surviving trace of the Ice Age, a relict of post-glacial times, without

parallel anywhere in Canada. There seems to be proof that mammoths and giant bison once roamed through this type of landscape. Recent discoveries of flint blades of a kind dating back several thousand years point to an ancient relationship between man and these hills.

The hills themselves are part of an ice age deltaic deposit of up to 200 feet of sand, formed long ago when the Assiniboine River discharged into Lake Agassiz.

These short notes about the Carberry Sand Hills have been adapted from an article by Robert W. Nero in the January 1971 issue of "Conservation Comment", published by the Manitoba Department of Mines and Natural Resources. The pamphlet is entitled "The Strange Sand Hills of Carberry" and the reader is referred to it for a great deal more detail of this unusual terrain that includes what is believed to be the only sand desert in Canada.

Sample Aerial Photos

Figure B

Single aerial photograph taken in the vicinity of Gladstone, Manitoba on July 27, 1970 at a contact scale of 1/80,000. The photograph illustrates about 121 square miles.

The upper right portion depicts a typical Rendzina soil area with the meadow grasses and sedges used for hay and pasture - a livestock area.

Diagonally at Gladstone is an alluvial area of fine sandy to silty clay loams. The area is completely covered with old neo glacial channels and is predominantly used for cash crops.

The remaining area, generally, consists of deltaic sands over fine materials. Note the sub-parallel aspect of the drainage pattern situated diagonally and probably influenced by the receding glacial lake. This area shows much rough and wooded pasture land and the farmsteads indicate livestock activity suggesting that this is a mixed livestock and grain or cash crop producing area.

Figure C

Single aerial photograph taken in the vicinity of Brookdale, Manitoba on July 27, 1970 at a contact scale of 1/80,000. The photograph depicts about 121 square miles.

The wind-worked sands are very obvious in the lower right quarter of the photograph - note the heavier vegetation on the northern slopes of the dunes. This area contains mostly rough and wooded pasture land. The very dark homogeneous and east-west strip pattern at the bottom of the area is reforestation.

Within the sand area to the right, and to the north of the sand area, the heavier soil appearance of the loams over the sands can be seen. The sloughs are lesser in amount in comparison to the more rugged till areas situated in the upper left diagonal half of the photograph. The many white spots are the well drained or eroded knolls of lacustrine over till soils. Also, the amount of pasture land is lesser in comparison to the rugged till area.

In the lower left corner a smaller portion of muck soil can be seen adjacent to the pronounced strip of the deltaic sands and outwash sands found between this muck and the dune sands. The muck area is entirely in rough and wooded pasture land.



AERIAL VIEW OF GLADSTONE AREA

FIGURE B

A21748

Rge. 17

Rge. 16

Twp. 12

Twp. 12

Twp. 11

Twp. 11



Rge. 17

Rge. 16

A21666-22

AERIAL VIEW OF BROOKDALE AREA

FIGURE C

Temperature Norms and Extremes

The meteorological data for the study area, shown in Table 12 are taken from four stations within or near the area. Neepawa is basically in the centre of the study area; Minnedosa is due west; Brandon is in the south west corner while Portage la Prairie is located just outside the eastern border. The climate of the area is continental, characterized by relatively hot summers (maximum 108° F) and cold winters (minimum -52° F), both registered at Minnedosa. The mean summer temperature (May to September) is approximately 59° F. The mean winter temperature (November to March) is approximately 19° F.

Precipitation

The mean annual precipitation in the region is between 17 and 23 inches, increasing from west to east. About three quarters of the precipitation falls as rain. The conversion factor used is 10 inches of snow equals one inch of rain.

Rainfall during the growing season is usually adequate to produce a crop.

Sales of Farm Land in the Study Area

An indication of farm land transactions in the study area is provided by the data in Table 14. For data purposes the authors examined 351 sales that were made in the six year period between 1965 and 1970. The greatest number of these transactions, 89, took place in the years 1966 and 1967, and it may be inferred that this reflects the good crop marketing conditions of those years. The smallest number of transactions, 12, took place in 1970. These transactions are representative in the sense that family and other types of deals involving concessions that would distort the value data were excluded from the tabulations. Only Farm Credit Corporation transactions were taken into consideration.

On the whole, prices increased, although there was a slight dip in 1968. The average price almost doubled in the six year period. Many factors enter into determining farm land value. Superficially, it would appear that at least the following three factors could be cited in explaining the observed price levels: soil classification, general inflation, and the grain marketing situation. Class 1 or 2 land is generally higher priced relative to class 3 or 4. General economic inflation is, in time, reflected in rising land values. Finally, when grain marketings keep pace with production, there is an upward pressure on land values, but when the supply of grain becomes too large relative to demand, the pressures on land values is downward.

TABLE 12. TEMPERATURES: MONTHLY NORMS AND EXTREMES AT METEOROLOGICAL STATIONS IN OR NEAR THE STUDY AREA

Meteorological Station	January	February	March	April	May	June	July	August	September	October	November	December	Year
Brandon													
Mean Daily Maximum (1)	8.5	14.0	27.7	48.2	64.3	71.3	79.9	76.7	65.1	52.3	30.6	16.6	46.3
Mean Daily Minimum (1)	- 9.7	- 7.0	7.1	26.0	38.3	48.5	53.7	51.5	41.5	29.5	13.4	- 2.2	24.1
Mean Daily Temperature (1)	- 0.6	3.5	17.4	37.1	51.3	59.9	66.8	64.1	53.3	40.9	22.0	7.2	35.2
Maximum Temperature (2)	41	53	62	90	92	95	103	99	89	86	66	45	103
Minimum Temperature (2)	-41	-43	-43	-10	15	26	36	33	15	0	-27	-35	-43
Minnedosa													
Mean Daily Maximum (3)	11.3	14.4	27.1	47.6	63.3	70.2	78.3	75.4	64.5	51.6	30.1	17.6	46.0
Mean Daily Minimum (3)	- 8.2	- 6.0	7.3	27.7	37.8	47.0	53.3	49.7	39.8	29.5	13.8	- 0.9	24.2
Mean Daily Temperature (3)	1.6	4.2	17.2	37.7	50.6	58.6	65.8	62.6	52.2	40.6	22.0	8.4	35.1
Maximum Temperature (4)	49	52	76	86	96	108	107	103	97	85	67	54	108
Minimum Temperature (4)	-52	-52	-44	-15	9	22	32	24	6	-11	-37	-47	-52
Neepawa													
Mean Daily Maximum (1)	8.9	14.0	26.5	46.7	62.7	71.0	77.8	75.4	64.1	51.8	30.4	17.1	45.6
Mean Daily Minimum (1)	- 8.5	- 5.4	7.9	26.9	39.1	49.8	54.8	52.8	43.1	31.8	14.8	0.3	25.6
Mean Daily Temperature (1)	0.2	4.3	17.2	36.8	50.9	60.4	66.3	64.1	53.6	41.8	22.6	8.7	35.6
Maximum Temperature (2)	43	47	66	90	95	95	98	99	94	83	66	48	99
Minimum Temperature (2)	-45	-35	-33	-16	15	29	38	33	16	5	-26	-32	-45
Portage La Prairie													
Mean Daily Maximum (3)	11.2	16.9	28.0	47.1	61.8	71.3	78.8	76.7	63.8	54.5	31.6	20.1	46.8
Mean Daily Minimum (3)	- 4.7	- 1.5	9.7	28.7	40.1	50.9	57.0	54.6	43.8	35.2	18.8	4.1	28.1
Mean Daily Temperature (3)	3.3	7.7	18.9	37.9	51.0	61.1	67.9	65.7	53.8	44.9	25.2	12.1	37.5
Maximum Temperature (2)	52	54	67	84	95	97	99	99	88	86	68	53	99
Minimum Temperature (2)	-42	-35	-30	-9	15	29	40	33	20	6	-23	-29	-42

(1) The data for these normals were from the full ten-year period 1951-1960 adjusted to the standard normal period 1931-1960.

(2) Normals were computed directly from a period of record of 25 to 30 years within the period 1931-1960. In most cases the record existed over the full 30 years.

(3) These averages are based on the period of record of 10 to 24 years during the period 1931-1960. No adjustment factor has been used.

(4) The normals are based on the full 30-year period, from 1931-1960.

Source: Canada Department of Transport, Meteorological Branch.

TABLE 13. PRECIPITATION: MONTHLY AND ANNUAL MEAN AT METEOROLOGICAL STATIONS IN OR NEAR THE STUDY AREA

Meteorological Station	January	February	March	April	May	June	July	August	September	October	November	December	Year
— inches —													
Brandon ¹													
Mean Rainfall	0.00	0.00	0.13	0.62	1.94	3.54	2.92	2.60	1.57	0.66	0.13	0.01	14.12
Mean Snowfall	7.6	5.6	8.9	4.3	0.8	0.00	0.00	0.00	0.3	3.8	7.2	7.9	46.4
Mean Total													
Precipitation ⁴	0.76	0.56	1.02	1.05	2.02	3.54	2.92	2.60	1.60	1.04	0.85	0.80	18.76
Minnedosa ²													
Mean Rainfall	0.00	0.15	0.56	1.92	3.30	2.94	2.37	1.46	0.56	0.09	T	13.35	
Mean Snowfall	6.9	7.0	8.8	2.6	1.0	0.00	0.00	0.00	0.5	4.4	5.7	6.5	43.4
Mean Total													
Precipitation ⁴	0.69	0.70	1.03	0.82	2.02	3.30	2.94	2.37	1.51	1.00	0.66	0.65	17.69
Neepawa ²													
Mean Rainfall	T ³	0.02	0.01	0.54	1.72	3.26	2.85	2.58	1.62	0.84	0.18	T	13.62
Mean Snowfall	9.2	5.9	9.3	3.9	1.4	T	0.00	0.00	0.1	4.5	9.1	9.5	52.9
Mean Total													
Precipitation ⁴	0.92	0.61	0.94	0.93	1.86	3.26	2.85	2.58	1.63	1.29	1.09	0.95	18.91
Portage La Prairie ²													
Mean Rainfall	0.02	0.02	0.26	0.67	2.40	3.87	2.98	2.93	2.43	1.05	0.28	0.02	16.93
Mean Snowfall	9.5	7.5	12.4	4.4	1.4	0.00	0.00	0.00	0.4	3.3	11.7	7.0	57.6
Mean Total													
Precipitation ⁴	0.97	0.77	1.50	1.11	2.54	3.87	2.98	2.93	2.47	1.38	1.45	0.72	22.69

¹Normals were computed directly from a period of record of 25 to 30 years within the period 1931-1960. In most cases the record existed over the full 30 years.²These averages are based on the period of record of 10 to 24 years during the period 1931-1960. No adjustment factor has been used.³T — less than 0.005 inches of precipitation.⁴Total precipitation measured in inches of rain. Ten inches of snow equals 1 inch of rain.

Source: Canada Department of Transport, Meteorological Branch.

TABLE 14. REPRESENTATIVE FARM VALUES, BY SALE PRICE PER ACRE, 1965 TO 1970

Year	Number of Transactions	Total Number of Acres	Price Per Acre		
			Low \$	High \$	Average \$
1965	69	21,052	12.50	110.03	47.28
1966	89	25,934	6.25	177.30	55.96
1967	89	26,502	15.72	150.00	67.79
1968	48	14,618	18.75	140.63	61.52
1969	44	12,123	22.41	159.24	67.80
1970	12	2,664	50.00	125.00	91.33

Source: Farm Credit Corporation.

Disposition of Grain Farm Acreage, Crop Years 1962-63, 1968-69 and 1970-71.

The number of acres associated with each delivery point and land use are shown in some detail for three crop years in Tables 15, 16 and 17. This information is provided by the farmers in the affidavits substantiating their requests for delivery permit books.

The crop year 1970-71 is a special year in that it is different from all years preceding it and will undoubtedly be different to all those following. For this reason, it shall be discussed separately, from the other two crop years 1962-63 and 1968-69.

Total farm acreage increased for the study area as a whole. In 1968-69 the farm acreage increased by 50,128 acres. Although there was this general increase in acreage many of the smaller communities showed losses in acreage tributary to the grain elevators. Rufford, for example, closed giving up 13,385 acres to neighbouring points. Four of the eight too small to classify communities and eleven of the eighteen hamlets decreased in size. Seven out of the twelve villages showed a decrease. Of the communities classified as towns, greater towns and cities all increased their farm acreage except for the town of Rapid City and the greater towns of MacGregor and Treherne. The greatest actual increase was at Brandon which went from 206,071 acres to 229,970 acres in 1968-69.

Little change occurred in the land use pattern between 1962-63 and 1968-69 in the total study area. Cropping practices approximate a

three year rotation of summerfallow, hard wheat, oats and other crops. One quarter of the land is unimproved and does not enter into the rotation.

The most noticeable changes in the two crop years are the increased acreages in barley and rapeseed. Barley increased from 55,885 acres in 1962-63 to 171,149 acres in 1968-69 while rapeseed increased from 290 acres to 3,985 acres in the same time period. Total unimproved land decreased by 75,989 acres.

Hard red wheat is strongly predominant in the area with 20.8 per cent in 1968-69, but some variations may be seen by examining the land use at individual delivery points.

Because of the tremendous wheat surplus and the marketing problems that had been developing in the late 60's Operation Lift was put into effect in 1970-71. It was hoped that if farmers grew less wheat, and if a large part of the surplus could be sold, the industry would recover.

Wheat was cut down considerably totalling only 203,232 acres compared with the 1968-69 figure of 479,170 acres, or 8.8 per cent of the study area total. Oats and barley each averaged 9.1 per cent of the total. Flaxseed was up 37,722 acres and rapeseed was up from 3,985 acres in 1968-69 to 34,401 acres in 1970-71 which is an increase of 30,416 acres.

Summerfallow remained fairly constant at 20 to 22 per cent in the two crop years not affected by Operation Lift.

TABLE 15. SEEDED ACREAGE ON GRAIN FARMS BY CROP AND DELIVERY POINT, 1962-63

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Summer Fallow	Forage Crops	Flaxseed	Rapeseed	Other Crops	Unimproved Land	Total
<i>Too Small to Classify</i>												
Rufford	2,621	838	1,287	329	—	3,152	561	—	—	185	4,412	13,385
Acres	19.6	6.3	9.6	2.4	0.0	23.5	4.2	—	—	1.4	33.0	100.0
Percent of Total												
Colby	6,401	235	6,164	863	25	7,934	3,654	2,661	—	50	3,975	31,962
Acres	20.0	0.7	19.3	2.7	0.1	24.8	11.4	8.3	—	0.2	12.5	100.0
Percent of Total												
Rignold	6,935	55	1,970	820	40	6,473	838	2,909	—	292	846	21,178
Acres	32.7	0.3	9.3	3.9	0.2	30.6	3.9	13.7	—	1.4	4.0	100.0
Percent of Total												
Howden	5,278	92	1,937	120	71	5,265	609	416	—	57	2,247	16,092
Acres	32.8	0.6	12.0	0.7	0.4	32.7	3.8	2.6	—	0.4	14.0	100.0
Percent of Total												
Springhill	6,407	380	1,714	178	—	5,228	1,042	640	50	—	1,750	17,389
Acres	36.8	2.2	9.8	1.0	—	30.1	6.0	3.7	0.3	—	10.1	100.0
Percent of Total												
Fairview	6,854	95	4,430	—	861	6,485	2,658	275	—	20	4,577	26,255
Acres	26.1	0.4	16.9	—	3.3	24.7	10.1	1.0	—	0.1	17.4	100.0
Percent of Total												
Golden Stream	2,050	185	3,599	130	45	3,213	1,875	868	—	—	1,190	13,155
Acres	15.6	1.4	27.4	1.0	0.3	24.4	14.3	6.6	—	—	9.0	100.0
Percent of Total												
Tenby	3,692	—	3,639	414	30	4,513	1,870	1,149	—	180	6,462	21,949
Acres	16.8	—	16.6	1.9	0.1	20.6	8.5	5.2	—	0.8	29.5	100.0
Percent of Total												
<i>Hamlets</i>												
Cordova	4,582	269	1,359	100	—	5,246	382	186	—	12	4,127	16,263
Acres	28.2	1.6	8.4	0.6	—	32.3	2.3	1.1	—	0.1	25.4	100.0
Percent of Total												
Gregg	5,615	105	4,309	—	371	6,341	2,209	342	—	226	5,639	25,157
Acres	22.3	0.4	17.1	—	1.5	25.2	8.8	1.4	—	0.9	22.4	100.0
Percent of Total												
Mentmore	4,846	436	3,447	583	588	5,918	1,879	479	—	—	4,292	22,468
Acres	21.6	1.9	15.4	2.6	2.6	26.3	8.4	2.1	—	—	19.1	100.0
Percent of Total												

TABLE 15. SEEDED ACREAGE ON GRAIN FARMS BY CROP AND DELIVERY POINT, 1962-63 (continued)

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Summer Fallow	Forage Crops	Flaxseed	Rapeseed	Other Crops	Unimproved Land	Total
Oberon												
Acres	3,417	—	2,995	213	555	3,471	1,655	160	—	91	1,618	14,175
Percent of Total	24.1	—	21.1	1.5	3.9	24.5	11.7	1.1	—	0.7	11.4	100.0
Moorepark												
Acres	5,411	47	2,150	622	—	6,095	557	726	—	30	7,801	23,439
Percent of Total	23.1	0.2	9.2	2.6	—	26.0	2.4	3.1	—	0.1	33.3	100.0
Beaver												
Acres	5,264	85	2,034	362	50	4,242	1,423	1,213	—	173	883	15,729
Percent of total	33.5	0.5	12.9	2.3	0.3	27.0	9.1	7.7	—	1.1	5.6	100.0
Firdale												
Acres	2,829	—	4,378	40	197	3,659	3,800	133	—	118	8,146	23,300
Percent of Total	12.1	—	18.8	0.2	0.8	15.7	16.3	0.6	—	0.5	35.0	100.0
Katrim												
Acres	8,099	45	8,670	620	486	8,970	9,567	3,630	—	576	9,302	49,965
Percent of Total	16.2	0.1	17.3	1.2	1.0	18.0	19.1	7.3	—	1.2	18.6	100.0
Ingelow												
Acres	1,606	90	1,251	—	170	1,910	1,635	138	—	85	3,107	9,992
Percent of Total	16.1	0.9	12.5	—	1.7	19.1	16.4	1.4	—	0.8	31.1	100.0
Edwin												
Acres	5,437	58	4,873	301	446	5,693	3,047	1,517	—	587	6,373	28,332
Percent of Total	19.2	0.2	17.2	1.1	1.6	20.1	10.7	5.3	—	2.1	22.5	100.0
Justice-Douglas												
Acres	14,655	281	7,307	1,342	1,136	13,628	9,969	1,870	12	65	13,678	63,943
Percent of Total	22.9	0.5	11.4	2.1	1.8	21.3	15.6	2.9	—	0.1	21.4	100.0
Heiston												
Acres	4,682	145	9,108	373	547	7,292	7,678	1,387	—	576	11,268	43,056
Percent of Total	10.9	0.3	21.2	0.9	1.3	16.9	17.8	3.2	—	1.3	26.2	100.0
Bethany												
Acres	3,950	84	913	188	—	3,901	460	142	—	1	3,034	12,673
Percent of Total	31.2	0.7	7.2	1.5	—	30.8	3.6	1.1	—	—	23.9	100.0
Franklin												
Acres	11,708	369	2,070	1,144	85	11,511	814	547	—	24	5,507	33,779
Percent of Total	34.7	1.1	6.1	3.4	0.2	34.1	2.4	1.6	—	0.1	16.3	100.0
Birnie												
Acres	7,381	335	4,888	989	25	7,492	3,799	332	—	295	14,179	39,715
Percent of Total	18.6	0.8	12.3	2.5	0.1	18.9	9.6	0.8	—	0.7	35.7	100.0

TABLE 15. SEEDED ACREAGE ON GRAIN FARMS BY CROP AND DELIVERY POINT, 1962-63 (continued)

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Summer Fallow	Forage Crops	Flaxseed	Rapeseed	Other Crops	Unimproved Land	Total
Forrest												
Acres	13,175	1,434	4,947	2,698	—	15,323	2,458	836	—	59	12,131	53,061
Percent of Total	24.8	2.7	9.3	5.1	—	28.9	4.6	1.6	—	0.1	22.9	100.0
Macdonald												
Acres	3,876	300	1,093	777	—	3,239	128	1,236	—	90	518	11,257
Percent of Total	34.4	2.7	9.7	6.9	—	28.8	1.1	11.0	—	0.8	4.6	100.0
Wellwood												
Acres	4,448	60	4,063	315	1,387	4,756	3,218	164	—	71	4,469	22,951
Percent of Total	19.4	0.3	17.7	1.4	6.0	20.7	14.0	0.7	—	0.3	19.5	100.0
<i>Villages</i>												
Riding Mountain												
Acres	4,630	—	2,815	1,022	—	3,809	1,982	286	—	—	7,338	21,882
Percent of Total	21.2	—	12.9	4.7	—	17.4	9.0	1.3	—	—	33.5	100.0
Rosendale												
Acres	4,666	30	5,107	71	137	5,374	3,519	598	—	213	9,022	28,737
Percent of Total	16.2	0.1	17.8	0.3	0.5	18.7	12.2	2.1	—	0.7	31.4	100.0
Clanwilliam												
Acres	15,693	271	6,658	3,495	135	17,808	2,511	110	—	465	25,347	72,493
Percent of Total	21.6	0.4	9.2	4.8	0.2	24.6	3.5	0.1	—	0.6	35.0	100.0
Basswood												
Acres	8,471	672	3,004	2,740	—	12,524	2,330	668	—	28	17,152	47,589
Percent of Total	17.8	1.4	6.3	5.8	—	26.3	4.9	1.4	—	0.1	36.0	100.0
Sidney												
Acres	4,123	84	6,470	357	890	5,975	7,400	115	—	256	24,569	50,239
Percent of Total	8.2	0.2	12.9	0.7	1.8	11.9	14.7	0.2	—	0.5	48.9	100.0
Eden												
Acres	15,269	683	7,661	760	38	16,311	3,086	1,116	8	378	13,405	58,715
Percent of Total	26.0	1.2	13.0	1.3	0.1	27.8	5.3	1.9	—	0.6	22.8	100.0
Brookdale												
Acres	13,009	1,499	7,742	1,028	530	14,740	5,170	1,084	60	140	9,442	54,444
Percent of Total	23.9	2.7	14.2	1.9	1.0	27.1	9.5	2.0	0.1	0.3	17.3	100.0
Westbourne												
Acres	5,058	185	4,668	1,330	225	5,254	1,638	1,330	—	—	6,008	25,696
Percent of Total	19.7	0.7	18.1	5.2	0.9	20.4	6.4	5.2	—	—	23.4	100.0

TABLE 15. SEEDED ACREAGE ON GRAIN FARMS BY CROP AND DELIVERY POINT, 1962-63 (continued)

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Fallow	Summer Crops	Forage Crops	Flaxseed	Rapeseed	Other Crops	Unimproved Land	Total
Arden											68	21,305	67,846
Acres	8,986	363	12,158	558	1,317	15,850	5,276	1,965	—	—	0.1	31.4	100.0
Percent of Total	13.3	0.5	17.9	0.8	1.9	23.4	7.8	2.9	—	—	213	27,825	85,333
Glenella											0.2	32.6	100.0
Acres	10,391	198	16,112	1,660	62	17,543	8,081	3,248	—	—	278	18,414	64,873
Percent of Total	12.2	0.2	18.9	1.9	0.1	20.6	9.5	3.8	—	—	0.1	4.4	100.0
Kelwood											70	11,835	55,412
Acres	12,807	105	8,600	2,080	15	14,087	7,429	1,008	50	278	—	28.4	100.0
Percent of Total	19.7	0.2	13.3	3.2	0.0	21.7	11.4	1.6	0.1	0.4	—	—	—
Plumas											70	11,835	55,412
Acres	7,346	55	12,268	852	43	11,819	7,656	3,468	—	—	0.1	21.4	100.0
Percent of Total	13.3	0.1	22.1	1.5	0.1	21.3	13.8	6.3	—	—	—	—	—
<i>Towns</i>													
Austin											966	20,031	66,408
Acres	8,179	571	12,209	377	1,287	12,582	7,982	2,224	—	—	1.5	30.2	100.0
Percent of Total	12.3	0.9	18.4	0.6	0.6	18.9	12.0	3.3	—	—	—	—	—
Rapid City											108	20,287	58,706
Acres	11,966	546	4,644	2,335	—	16,406	1,691	723	—	—	0.2	34.6	100.0
Percent of Total	20.4	0.9	7.9	4.0	—	27.9	2.9	1.2	—	—	—	—	—
McCreary											168	34,437	95,091
Acres	11,499	277	14,070	3,907	207	17,060	12,158	1,308	—	—	0.2	36.2	100.0
Percent of Total	12.1	0.3	14.8	4.1	0.2	17.9	12.8	1.4	—	—	—	—	—
<i>Greater Towns</i>													
Erickson											1,026	36,920	79,042
Acres	8,553	68	6,133	5,283	131	13,925	6,967	36	—	—	1.3	46.7	100.0
Percent of Total	10.8	0.1	7.8	6.7	0.2	17.6	8.8	0.0	—	—	—	—	—
Treherne											316	18,535	78,351
Acres	18,852	130	11,159	635	2,117	15,231	8,058	3,308	10	—	0.4	23.7	100.0
Percent of Total	24.1	0.2	14.2	0.8	2.7	19.4	10.3	4.2	—	—	—	—	—
MacGregor											177	22,089	77,250
Acres	9,494	140	16,075	323	1,170	13,225	12,144	2,388	25	—	0.2	28.6	100.0
Percent of Total	12.3	0.2	20.8	0.4	1.5	17.1	15.7	3.1	0.1	—	—	—	—
Carberry											191	15,216	44,648
Acres	6,356	85	5,262	200	2,254	7,333	6,850	901	—	—	0.4	34.1	100.0
Percent of Total	14.2	0.2	11.8	0.5	5.1	16.4	15.3	2.0	—	—	—	—	—

TABLE 15. SEEDED ACREAGE ON GRAIN FARMS BY CROP AND DELIVERY POINT, 1962-63 (concluded)

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Summer Fallow	Forage Crops	Flaxseed	Rapeseed	Other Crops	Unimproved Land	Total
Gladstone												
Acres	14,029	841	24,542	4,564	570	23,141	17,490	5,339	—	494	21,069	112,079
Percent of Total	12.5	0.8	21.9	4.1	0.5	20.6	15.6	4.8	—	0.4	18.8	100.0
Minnedosa												
Acres	17,077	315	5,257	1,265	20	18,627	4,025	469	—	67	22,912	70,034
Percent of Total	24.4	0.5	7.5	1.8	—	26.6	5.7	0.7	—	0.1	32.7	100.0
Neepawa												
Acres	12,721	712	9,322	320	3,328	16,442	4,984	649	—	139	16,098	64,715
Percent of Total	19.7	1.1	14.4	0.5	5.1	25.4	7.7	1.0	—	0.2	24.9	100.0
<i>Cities</i>												
Brandon												
Acres	36,798	3,734	31,448	7,202	4,094	49,025	22,915	1,467	75	648	48,665	206,071
Percent of Total	17.9	1.8	15.3	3.5	2.0	23.8	11.1	0.7	—	0.3	23.6	100.0
Study Area Total												
Acres	417,192	17,587	327,979	55,885	25,685	505,041	229,127	57,764	290	10,272	609,452	2,256,274
Percent of Total	18.5	0.8	14.5	2.5	1.1	22.4	10.1	2.6	—	0.5	27.0	100.0

Source: Canadian Wheat Board.

TABLE 16. SEEDED ACREAGE ON GRAIN FARMS, BY CROP AND DELIVERY POINT, 1968-69

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Summer Fallow	Forage Crops	Flaxseed	Rapeseed	Other Crops	Unimproved Land	Total
<i>Too Small to Classify</i>												
Rufford	Closed											
Acres												
Percent of Total												
Colby												
Acres	8,442	50	5,946	2,367	45	8,347	3,873	1,519	90	108	5,067	35,854
Percent of Total	23.6	0.1	16.6	6.6	0.1	23.3	10.8	4.2	0.3	0.3	14.1	100.0
Rignold												
Acres	5,429	20	1,595	2,858	140	4,984	1,083	1,877	167	358	661	19,172
Percent of Total	28.3	0.1	8.3	14.9	0.7	26.0	5.7	9.8	0.9	1.9	3.4	100.0
Howden												
Acres	2,867	50	909	391	137	2,600	424	103	—	53	903	8,437
Percent of Total	34.0	0.6	10.8	4.7	1.6	30.8	5.0	1.2	—	0.6	10.7	100.0
Springhill												
Acres	7,762	197	2,535	2,434	47	6,037	955	265	28	217	2,645	23,122
Percent of Total	33.6	0.9	11.0	10.5	0.2	26.1	4.1	1.2	0.1	0.9	11.4	100.0
Fairview												
Acres	8,467	27	2,760	448	1,577	8,065	1,694	125	105	353	4,840	28,461
Percent of Total	29.8	0.1	9.7	1.6	5.5	28.3	6.0	0.4	0.4	1.2	17.0	100.0
Golden Stream												
Acres	3,167	452	3,532	1,549	120	3,266	2,884	1,952	—	672	2,490	20,084
Percent of Total	15.8	2.2	17.6	7.7	0.6	16.3	14.4	9.7	—	3.3	12.4	100.0
Tenby												
Acres	3,525	—	3,166	929	—	3,572	1,862	962	—	10	3,876	17,902
Percent of Total	19.7	—	17.7	5.2	—	19.9	10.4	5.4	—	0.1	21.6	100.0
<i>Hamlets</i>												
Cordova												
Acres	4,832	231	1,207	1,187	—	4,328	398	24	45	77	3,055	15,384
Percent of Total	31.4	1.5	7.8	7.7	—	28.1	2.6	0.2	0.3	0.5	19.9	100.0
Gregg												
Acres	7,174	—	3,568	814	589	6,189	2,253	306	35	285	4,959	26,172
Percent of Total	27.4	—	13.6	3.1	2.3	23.6	8.6	1.2	0.1	1.1	19.0	100.0
Mentmore												
Acres	4,750	653	2,056	3,336	830	5,094	1,489	191	—	135	3,220	21,754
Percent of Total	21.8	3.0	9.5	15.3	3.8	23.4	6.9	0.9	—	0.6	14.8	100.0

TABLE 16. SEEDED ACREAGE ON GRAIN FARMS, BY CROP AND DELIVERY POINT 1968-69 (continued)

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Summer Fallow	Forage Crops	Flaxseed	Rapeseed	Other Crops	Unimproved Land	Total
Oberon												
Acres	4,460	340	3,159	948	1,039	2,637	1,158	760	—	787	1,947	17,235
Percent of Total	25.9	2.0	18.3	5.5	6.0	15.3	6.7	4.4	—	4.6	11.3	100.0
Moorepark												
Acres	7,563	85	2,450	1,612	—	7,406	403	670	—	568	6,926	27,683
Percent of Total	27.3	0.3	8.8	5.8	—	26.8	1.5	2.4	—	2.1	25.0	100.0
Beaver												
Acres	4,668	92	2,938	2,541	30	3,957	727	1,059	72	762	1,593	18,439
Percent of Total	25.3	0.5	15.9	13.8	0.2	21.5	3.9	5.8	0.4	4.1	8.6	100.0
Firdale												
Acres	3,388	15	3,339	754	324	3,398	3,604	363	—	30	7,619	22,834
Percent of Total	14.8	0.1	14.6	3.3	1.4	14.9	15.8	1.6	—	0.1	33.4	100.0
Katrine												
Acres	6,681	150	5,715	4,061	259	6,542	4,895	2,595	228	910	5,470	37,506
Percent of Total	17.8	0.4	15.2	10.8	0.7	17.5	13.1	6.9	0.6	2.4	14.6	100.0
Ingelow												
Acres	3,084	245	1,134	981	1,092	2,662	1,310	60	—	245	3,091	13,904
Percent of Total	22.2	1.8	8.2	7.1	7.8	19.1	9.4	0.4	—	1.8	22.2	100.0
Edwin												
Acres	5,244	—	3,524	1,467	831	4,785	3,476	2,331	—	980	4,991	27,629
Percent of Total	19.0	0.0	12.8	5.3	3.0	17.3	12.6	8.4	—	3.5	18.1	100.0
Justice												
Acres	14,176	393	6,265	5,128	1,796	11,810	9,665	1,074	—	339	10,616	61,262
Percent of Total	23.1	0.6	10.2	8.4	2.9	19.3	15.8	1.8	—	0.6	17.3	100.0
Heiston												
Acres	5,596	219	9,994	2,525	424	7,053	10,239	2,311	243	526	9,653	48,783
Percent of Total	11.5	0.4	20.5	5.2	0.9	14.4	21.0	4.7	0.5	1.1	19.8	100.0
Bethany												
Acres	2,831	—	701	752	624	2,532	796	35	—	155	3,200	11,626
Percent of Total	24.4	—	6.0	6.5	5.4	21.8	6.8	0.3	—	1.3	27.5	100.0
Franklin												
Acres	9,883	146	759	4,127	160	8,407	293	477	—	10	3,876	28,138
Percent of Total	35.1	0.5	2.7	14.7	0.6	29.9	1.0	1.7	—	0.0	13.8	100.0
Birnie												
Acres	7,490	41	4,161	1,272	10	7,189	3,825	393	—	45	12,101	36,527
Percent of Total	20.5	0.1	11.4	3.5	0.0	19.7	10.5	1.1	—	0.1	33.1	100.0

TABLE 16. SEEDED ACREAGE ON GRAIN FARMS, BY CROP AND DELIVERY POINT 1968-69 (continued)

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Summer Fallow	Forage Crops	Flaxseed	Rapeseed	Other Crops	Unimproved Land	Total
Forrest												
Acres	13,960	937	3,201	4,215	30	12,662	1,357	1,803	65	180	8,475	46,885
Percent of Total	29.8	2.0	6.8	9.0	0.1	27.0	2.9	3.8	0.1	0.4	18.1	100.0
Macdonald												
Acres	10,528	576	2,101	8,110	—	8,075	919	3,305	40	63	2,331	36,048
Percent of Total	29.2	1.6	5.8	22.5	—	22.4	2.5	9.2	0.1	0.2	6.5	100.0
Wellwood												
Acres	4,925	90	3,314	567	475	5,363	3,399	140	—	183	4,274	22,730
Percent of Total	21.7	0.4	14.6	2.5	2.1	23.6	14.9	0.6	—	0.8	18.8	100.0
<i>Villages</i>												
Riding Mountain												
Acres	6,738	—	3,638	1,100	—	5,120	2,275	130	—	415	6,452	25,868
Percent of Total	26.0	—	14.1	4.3	—	19.8	8.8	0.5	—	1.6	24.9	100.0
Rosendale												
Acres	4,535	20	4,026	1,000	371	3,672	2,271	1,628	3	334	6,626	24,486
Percent of Total	18.5	0.1	16.4	4.1	1.5	15.0	9.3	6.6	—	1.4	27.1	100.0
Clanwilliam												
Acres	15,518	948	4,782	6,408	50	16,197	3,253	155	294	1,589	19,288	68,482
Percent of Total	22.7	1.4	7.0	9.4	0.1	23.6	4.7	0.2	0.4	2.3	28.2	100.0
Basswood												
Acres	10,907	93	2,679	4,243	65	12,249	1,542	503	212	318	16,001	48,812
Percent of Total	22.3	0.2	5.5	8.7	0.1	25.1	3.2	1.0	0.4	0.7	32.8	100.0
Sidney												
Acres	3,897	—	5,140	1,122	902	4,752	5,593	318	—	1,133	18,858	41,715
Percent of Total	9.3	—	12.3	2.7	2.2	11.4	13.4	0.8	—	2.7	45.2	100.0
Eden												
Acres	16,313	257	6,824	2,162	172	15,470	4,105	637	11	490	11,945	58,386
Percent of Total	27.9	0.5	11.7	3.7	0.3	26.5	7.0	1.1	—	0.8	20.5	100.0
Brookdale												
Acres	13,790	1,472	6,725	5,592	929	10,827	2,910	772	40	325	6,688	50,070
Percent of Total	27.5	2.9	13.4	11.2	1.9	21.6	5.8	1.5	0.1	0.7	13.4	100.0
Westbourne												
Acres	5,065	269	3,187	7,452	—	6,838	2,188	2,488	338	402	6,392	34,619
Percent of Total	14.6	0.8	9.2	21.5	0.0	19.7	6.3	7.2	1.0	1.2	18.5	100.0

TABLE 16. SEEDED ACREAGE ON GRAIN FARMS, BY CROP AND DELIVERY POINT 1968-69 (continued)

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Summer Fallow	Forage Crops	Flaxseed	Rapeseed	Other Crops	Unimproved Land	Total
Arden												
Acres	10,781	170	12,452	3,171	1,033	13,675	6,305	2,452	68	936	17,604	68,647
Percent of Total	15.7	0.3	18.1	4.6	1.5	19.9	9.2	3.6	0.1	1.4	25.6	100.0
Glenella												
Acres	12,300	—	14,756	3,026	69	16,178	7,455	3,321	—	300	23,838	81,243
Percent of Total	15.1	—	18.2	3.7	0.1	19.9	9.2	4.1	—	0.4	29.3	100.0
Kelwood												
Acres	12,275	—	8,562	2,421	—	12,385	6,948	1,891	6	296	15,305	60,089
Percent of Total	20.4	—	14.3	4.0	—	20.6	11.6	3.1	—	0.5	25.5	100.0
Plumas												
Acres	9,112	95	12,272	2,407	262	10,138	7,631	4,227	—	1,178	9,249	56,571
Percent of Total	16.1	0.2	21.7	4.2	0.5	17.9	13.5	7.5	—	2.1	16.3	100.0
<i>Towns</i>												
Austin												
Acres	11,095	56	11,469	5,206	1,030	10,768	7,679	2,173	—	1,060	17,418	67,954
Percent of Total	16.3	0.1	16.9	7.7	1.5	15.8	11.3	3.2	—	1.6	25.6	100.0
Rapid City												
Acres	13,721	314	3,478	4,452	108	14,167	1,156	1,254	112	1,107	17,450	57,319
Percent of Total	23.9	0.6	6.1	7.8	0.2	24.7	2.0	2.2	0.2	1.9	30.4	100.0
McCreary												
Acres	15,300	—	14,651	5,843	30	17,733	14,308	2,567	134	488	35,430	106,484
Percent of Total	14.4	—	13.8	5.5	0.0	16.6	13.4	2.4	0.1	0.5	33.3	100.0
<i>Greater Towns</i>												
Erickson												
Acres	12,845	—	5,767	8,100	217	18,721	7,312	239	756	2,134	34,756	90,847
Percent of Total	14.1	—	6.3	8.9	0.2	20.6	8.1	0.3	0.8	2.4	38.3	100.0
Treherne												
Acres	22,288	320	9,259	4,083	1,554	14,917	8,088	2,643	—	551	18,098	81,801
Percent of Total	27.3	0.4	11.3	5.0	1.9	18.2	9.9	3.2	—	0.7	22.1	100.0
MacGregor												
Acres	11,408	—	12,135	4,307	1,632	11,842	8,725	2,803	161	1,413	15,964	70,390
Percent of Total	16.2	—	17.3	6.1	2.3	16.8	12.4	4.0	0.2	2.0	22.7	100.0
Carberry												
Acres	5,989	—	4,421	860	1,919	6,671	6,117	622	—	210	12,666	39,475
Percent of Total	15.2	—	11.2	2.2	4.8	16.9	15.5	1.6	—	0.5	32.1	100.0

TABLE 16. SEEDED ACREAGE ON GRAIN FARMS, BY CROP AND DELIVERY POINT 1968-69 (concluded)

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Summer Fallow	Forage Crops	Flaxseed	Rapeseed	Other Crops	Unimproved Land	Total
Gladstone												
Acres	17,553	140	20,114	11,292	1,165	20,388	17,372	6,435	309	1,908	20,552	117,228
Percent of Total	15.0	0.1	17.2	9.6	1.0	17.4	14.8	5.5	0.3	1.6	17.5	100.0
Minnedosa												
Acres	22,659	278	4,759	7,764	475	22,937	3,432	613	88	289	23,266	86,560
Percent of Total	26.2	0.3	5.5	9.0	-0.5	26.5	4.0	0.7	0.1	0.3	26.9	100.0
Neepawa												
Acres	14,968	1,137	8,626	2,261	2,229	15,190	5,577	445	45	235	15,102	65,815
Percent of Total	22.7	1.7	13.1	3.4	3.4	23.1	8.5	0.7	0.1	0.4	22.9	100.0
<i>Cities</i>												
Brandon												
Acres	49,221	1,570	31,930	21,504	6,932	43,438	24,295	2,617	290	1,537	46,636	229,970
Percent of Total	21.4	0.7	13.9	9.3	3.0	18.9	10.6	1.1	0.1	0.7	20.3	100.0
Study Area Total												
Acres	479,170	12,148	291,681	171,149	31,723	471,233	219,518	65,633	3,985	26,699	533,463	2,306,402
Percent of Total	20.8	0.5	12.7	7.4	1.4	20.4	9.5	2.8	0.2	1.2	23.1	100.0

Source: Canadian Wheat Board.

TABLE 17. SEEDED ACREAGE ON GRAIN FARMS, BY CROP AND DELIVERY POINT, 1970-71

TABLE 17. SEEDED ACREAGE ON GRAIN FARMS, BY CROP AND DELIVERY POINT, 1970-71 (continued)

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Fallow	Summer Breaking	New Forage	Perennial Forage	Flax- seed	Rape- seed	Other Crops	Unimproved Land	Total
Oberon														
Acres	1,629	124	1,534	1,019	1,572	3,967	20	1,016	525	187	1,947	2,235	15,775	
Percent of Total	10.3	0.8	9.7	6.5	10.0	25.2	0.1	6.4	3.3	1.2	12.3	14.2	100.0	
Moorepark														
Acres	3,429	490	2,436	2,923	67	10,318	90	698	2,300	188	107	7,509	30,555	
Percent of Total	11.2	1.6	8.0	9.6	0.2	33.8	0.3	2.3	7.5	0.6	0.3	24.6	100.0	
Beaver														
Acres	2,624	130	2,471	4,462	—	6,468	—	2,039	2,391	613	1,801	2,433	25,432	
Percent of Total	10.3	0.5	9.7	17.6	—	25.4	—	8.0	9.4	2.4	7.1	9.6	100.0	
Firdale														
Acres	1,938	—	3,262	1,136	367	5,593	35	3,613	795	80	383	7,029	24,231	
Percent of Total	8.0	—	13.5	4.7	1.5	23.1	0.1	14.9	3.3	0.3	1.6	29.0	100.0	
Katrine														
Acres	1,965	50	3,835	3,967	278	8,750	30	6,809	2,940	583	914	5,580	35,701	
Percent of Total	5.5	0.1	10.8	11.1	0.8	24.5	0.1	19.1	8.2	1.6	2.6	15.6	100.0	
Ingleow														
Acres	1,274	277	995	993	1,504	3,793	—	1,271	360	70	300	2,515	13,352	
Percent of Total	9.5	2.1	7.5	7.4	11.3	28.4	—	9.5	2.7	0.5	2.3	18.8	100.0	
Edwin														
Acres	1,741	—	3,027	2,286	413	7,491	57	3,205	2,370	76	840	4,602	26,108	
Percent of Total	6.7	—	11.6	8.7	1.6	28.7	0.2	12.3	9.1	0.3	3.2	17.6	100.0	
Justice-Douglas														
Acres	5,067	647	4,476	6,412	829	14,662	160	13,454	3,773	177	471	10,076	60,204	
Percent of Total	8.4	1.1	7.4	10.6	1.4	24.4	0.3	22.3	6.3	0.3	0.8	16.7	100.0	
Helston														
Acres	2,718	242	5,307	2,272	804	12,308	—	11,001	1,873	632	697	11,144	48,998	
Percent of Total	5.6	0.5	10.8	4.6	1.6	25.1	—	22.5	3.8	1.3	1.4	22.8	100.0	
Bethany														
Acres	1,285	—	768	877	1,235	3,695	70	705	237	143	—	3,115	12,130	
Percent of Total	10.6	—	6.3	7.2	10.2	30.5	0.6	5.8	1.9	1.2	—	25.7	100.0	
Franklin														
Acres	3,621	257	977	4,186	1,095	11,489	—	843	1,838	882	121	4,343	29,652	
Percent of Total	12.2	0.9	3.3	14.1	3.7	38.7	—	2.8	6.2	3.0	0.4	14.7	100.0	
Birnie														
Acres	2,872	—	3,365	1,642	85	8,022	—	4,377	408	—	57	9,937	30,765	
Percent of Total	9.3	—	11.0	5.3	0.3	26.1	—	14.2	1.3	—	0.2	32.3	100.0	

TABLE 17. SEEDED ACREAGE ON GRAIN FARMS, BY CROP AND DELIVERY POINT, 1970-71 (continued)

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Summer Fallow	New Fallow	Persistent Forage	Flax-seed	Rape-seed	Other Crops	Unimproved Land	Total
Forrest	5,153	606	1,958	6,506	472	16,925	22	2,466	3,629	711	123	8,981	47,552
Acres	10.8	1.3	4.1	13.7	1.0	35.6	0.0	5.2	7.6	1.5	0.3	18.9	100.0
Percent of Total													
Macdonald	5,913	230	1,039	10,343	—	12,976	60	1,874	5,174	1,138	559	3,607	42,913
Acres	13.8	0.5	2.4	24.1	—	30.2	0.1	4.4	12.1	2.7	1.3	8.4	100.0
Percent of Total													
Wellwood	2,329	133	1,926	1,666	523	4,600	—	2,551	565	262	1,459	4,757	20,771
Acres	11.2	0.6	9.3	8.0	2.5	22.2	—	12.3	2.7	1.3	7.0	22.9	100.0
Percent of Total													
<i>Villages</i>													
Riding Mountain	4,363	—	3,583	1,671	30	9,369	52	3,613	385	10	245	9,554	32,875
Acres	13.3	—	10.9	5.1	0.1	28.5	0.1	11.0	1.2	0.0	0.7	29.1	100.0
Percent of Total													
Rossendale	1,752	—	2,574	918	394	6,304	70	3,545	2,076	317	2,207	6,463	26,620
Acres	6.6	—	9.7	3.4	1.5	23.7	0.2	13.3	7.8	1.2	8.3	24.3	100.0
Percent of Total													
Clanwilliam	5,472	180	4,563	5,871	1,230	20,048	87	4,627	1,328	2,345	107	19,513	65,371
Acres	8.4	0.3	7.0	9.0	1.9	30.7	0.1	7.1	2.0	3.6	0.1	29.8	100.0
Percent of Total													
Basswood	5,696	43	1,699	5,545	733	14,991	42	1,976	1,977	1,183	48	16,574	50,507
Acres	11.3	0.1	3.4	11.0	1.4	29.7	0.1	3.9	3.9	2.3	0.1	32.8	100.0
Percent of Total													
Sidney	2,329	74	3,199	2,454	701	4,004	100	6,842	177	—	1,887	16,910	38,677
Acres	6.0	0.2	8.3	6.3	1.8	10.3	0.3	17.7	0.5	—	4.9	43.7	100.0
Percent of Total													
Eden	6,198	751	5,281	3,017	213	23,099	135	7,399	2,065	775	831	14,192	63,956
Acres	9.7	1.2	8.3	4.7	0.3	36.1	0.2	11.6	3.2	1.2	1.3	22.2	100.0
Percent of Total													
Brookdale	4,955	1,122	3,249	7,142	1,554	14,353	39	4,073	1,473	722	2,684	6,329	47,695
Acres	10.4	2.3	6.8	15.0	3.3	30.1	0.1	8.5	3.1	1.5	5.6	13.3	100.0
Percent of Total													
Westbourne	1,635	—	774	5,583	—	7,298	—	2,217	1,611	1,143	145	4,516	24,922
Acres	6.5	—	3.1	22.4	—	29.3	—	8.9	6.5	4.6	0.6	18.1	100.0
Percent of Total													

TABLE 17. SEEDED ACREAGE ON GRAIN FARMS; BY CROP AND DELIVERY POINT, 1970-71 (continued)

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Summer Fallow	New Breaking	Perennial Forage	Flax- seed	Rape- seed	Other Crops	Unimproved Land	Total
Arden													
Acres	4,366	156	7,193	3,413	623	17,152	24	6,741	2,492	390	1,443	14,558	58,551
Percent of Total	7.4	0.3	12.3	5.8	1.1	29.3	0.0	11.5	4.2	0.7	2.5	24.9	100.0
Glenella													
Acres	7,094	100	11,749	3,707	14	21,944	164	8,372	2,951	55	260	25,307	81,717
Percent of Total	8.7	0.1	14.4	4.5	0.0	26.9	0.2	10.2	3.6	0.1	0.3	31.0	100.0
Kelwood													
Acres	5,936	—	6,807	2,007	30	16,779	290	7,210	1,182	—	45	14,339	54,425
Percent of Total	10.9	—	12.1	3.7	0.1	30.8	0.5	13.3	2.2	—	0.1	26.3	100.0
Plumas													
Acres	4,390	395	5,537	2,831	296	15,335	25	8,086	4,352	100	1,905	10,707	53,959
Percent of Total	8.1	0.7	10.3	5.3	0.6	28.4	0.0	15.0	8.1	0.2	3.5	19.8	100.0
<i>Towns</i>													
Austin													
Acres	4,183	46	7,470	5,483	963	12,767	30	8,298	1,934	234	1,349	14,711	57,468
Percent of Total	7.3	0.1	13.0	9.5	1.7	22.2	0.1	14.4	3.4	0.4	2.3	25.6	100.0
Rapid City													
Acres	5,220	258	2,541	3,471	1,268	16,721	64	1,552	3,035	1,854	279	15,706	51,969
Percent of Total	10.0	0.5	4.9	6.7	2.4	32.2	0.1	3.0	5.9	3.6	0.5	30.2	100.0
McCreary													
Acres	6,761	87	13,202	5,499	316	25,190	381	15,701	3,178	714	490	29,961	101,480
Percent of Total	6.7	0.1	13.0	5.4	0.3	24.8	0.4	15.5	3.1	0.7	0.5	29.5	100.0
<i>Greater Towns</i>													
Erickson													
Acres	5,109	—	5,827	9,026	454	24,457	160	7,425	462	2,186	70	32,732	87,908
Percent of Total	5.8	—	6.6	10.3	0.5	27.8	0.2	8.5	0.5	2.5	0.1	37.2	100.0
Treherne													
Acres	8,522	123	7,639	5,779	1,109	16,636	90	11,339	5,601	1,125	5,531	19,818	83,312
Percent of Total	10.2	0.2	9.2	6.9	1.3	20.0	0.1	13.6	6.7	1.4	6.6	23.8	100.0
MacGregor													
Acres	3,860	50	6,945	6,780	812	14,862	40	8,283	3,763	1,377	3,260	16,154	66,186
Percent of Total	5.8	0.1	10.5	10.2	1.2	22.5	0.1	12.5	5.7	2.1	4.9	24.4	100.0
Carberry													
Acres	3,060	1	4,883	2,349	1,218	5,940	—	7,391	1,171	318	4,392	15,654	46,377
Percent of Total	6.6	0.0	10.5	5.1	2.6	12.8	—	15.9	2.5	0.7	9.5	33.8	100.0

TABLE 17. SEEDED ACREAGE ON GRAIN FARMS, BY CROP AND DELIVERY POINT, 1970-71 (concluded)

Delivery Point	Wheat	Durum	Oats	Barley	Rye	Summer Fallow	New Breaking	Perennial Forage	Flax-seed	Rape-seed	Other Crops	Unimproved Land	Total
Gladstone	5,591	165	12,345	10,928	1,083	36,913	55	22,904	7,320	979	3,328	20,597	122,208
Acres	4.6	0.1	10.1	8.9	0.9	30.2	0.1	18.7	6.0	0.8	2.7	16.9	100.0
Percent of Total													
Minnedosa	10,175	362	4,054	8,359	3,263	35,295	173	4,391	3,595	4,018	235	28,808	102,728
Acres	9.9	0.4	3.9	8.1	3.2	34.4	0.2	4.3	3.5	3.9	0.2	28.0	100.0
Percent of Total													
Neepawa	6,629	547	8,309	5,436	2,013	21,376	24	6,719	1,567	1,058	936	16,523	71,137
Acres	9.3	0.8	11.7	7.6	2.8	30.1	0.0	9.5	2.2	1.5	1.3	23.2	100.0
Percent of Total													
<i>Cities</i>													
Brandon	23,726	2,236	26,167	32,532	4,681	67,303	126	31,435	7,092	4,396	1,837	54,028	255,559
Acres	9.3	0.9	10.2	12.7	1.8	26.3	0.1	12.3	2.8	1.7	0.7	21.2	100.0
Percent of Total													
<i>Study Area Total</i>													
Acres	203,232	11,785	210,611	210,396	35,364	638,784	2,963	264,623	103,355	34,401	54,621	541,563	2,311,698
Percent of Total	8.8	0.5	9.1	9.1	1.5	27.6	0.1	11.5	4.5	1.5	2.4	23.4	100.0

Source: Canadian Wheat Board.

Crop Yields in the Study Area

Table 18 shows the six year average yield of wheat, oats, barley, rye and flaxseed, in the study area from the year 1964 to 1969.

Brookdale recorded the highest six year average yield of wheat in the study area with 31 bushels per acre. Rignold, Mentmore, Justice-Douglas, Franklin and Macdonald all recorded the second highest average yield of 30 bushels per acre. A perusal of the table would lead one to infer that in this region the best crop lands are in the hinterlands surrounding the smaller grain delivery communities.

The hinterlands surrounding these five communities are Class 1 and Class 2 soils. This correlation between crop yields and soil capability rating is verified in this area, as communities showing low yields per acre are on Class 3, 4 and/or 5 soils. The reader is referred to the section on Soil Capability for Agriculture in Part II of this report for a discussion on crop yields and soil capability.

Coarse grains are important in the region, and some good yields have been obtained. For instance, Brookdale has an average yield of 53 bushels of oats per acre and 45 bushels of barley per acre.

TABLE 18. SIX-YEAR AVERAGE YIELD OF WHEAT, OATS, BARLEY, RYE AND FLAXSEED, BY DELIVERY POINT, 1964 TO 1969.

Delivery Point	Wheat	Oats	Barley	Rye	Flaxseed							
					6-Year			6-Year			6-Year	
					High	Low	Range	Average	High	Low	Range	Average
<i>To Small to Classify</i>												
Rufford	30	25	5	28 ¹	60	55	5	57 ¹	25	25	—	25 ¹
Colby	35	15	20	28	50	35	15	41	40	30	10	36
Rignold	38	25	13	30	55	45	10	51	45	30	15	38
Howden	30	25	5	26	60	40	20	49	40	30	10	38
Springhill	30	25	5	28	60	50	10	55	40	30	10	36
Fairview	30	20	10	27	55	30	25	44	60	30	30	40 ²
Golden Stream	30	20	10	24	50	25	25	38	45	25	20	34
Tenby	30	20	10	24 ²	40	30	10	38 ²	40	25	15	33 ²
<i>Hamlets</i>												
Cordova	35	17	18	26	70	35	20	49	55	28	27	39
Gregg	35	25	10	28	55	35	20	49	35	25	10	29 ²
Mentmore	35	25	10	30	60	50	10	55	50	35	15	43
Oberon	25	20	5	23	50	40	10	45	35	30	5	32
Moorepark	35	20	15	27	75	50	25	62	50	30	20	40
Beaver	30	25	5	28 ²	50	40	10	45 ²	50	25	25	38 ²
Firdale	25	18	7	23 ²	50	40	10	42 ²	40	30	10	38 ²
Katrine	30	25	5	27	50	30	20	40	45	22	23	34
Ingelow	30	24	6	28	50	35	15	40	40	25	15	32 ²
Edwin	35	25	10	29	55	35	20	46	40	25	15	33
Justice Douglas	35	25	10	30	70	40	30	54	48	30	18	38
Helston	25	20	5	22	50	40	10	46	45	25	20	32
Bethany	25	18	7	21	50	30	20	40	55	30	25	41
Franklin	35	25	10	30	65	55	10	60	44	33	11	38
Birnie	30	20	10	24	45	40	5	42	40	35	5	38
Forrest	30	25	5	27	50	40	10	48	35	25	10	31
Macdonald	35	25	10	30 ²	65	40	25	51 ²	50	30	20	40 ²
Wellwood	30	17	13	21	45	25	20	36	50	30	20	38

TABLE 18. SIX-YEAR AVERAGE YIELD OF WHEAT, OATS, BARLEY, RYE AND FLAXSEED, BY DELIVERY POINT, 1964 TO 1969 (concluded)

Delivery Point	Wheat			Oats			Barley			Rye			Flaxseed			
	High Low Range Average			6-Year			6-Year			6-Year			6-Year			
	High	Low	Range	Average	High	Low	Range	Average	High	Low	Range	Average	High	Low	Range	Average
<i>Villages</i>																
Riding Mountain	28	15	13	21	60	35	25	42	45	25	20	32	—	—	9	7
Rossendale	35	18	17	24	60	30	30	44	35	15	20	29 ²	30	15	26	15
Clanwilliam	30	20	10	24	50	30	20	42	30	20	10	26	20	15	10	8
Basswood	30	22	8	26	60	50	10	57	40	30	10	34	20	15	5	18 ³
Sidney	24	19	5	22 ²	50	26	24	34 ²	40	25	15	34 ²	16	8	8	15 ³
Eden	35	20	15	27	60	40	20	48	40	30	10	36	25	12	13	19 ¹
Brookdale	35	25	10	31	70	50	20	58	50	40	10	45	20	15	5	18
Westbourne	26	18	8	22 ²	50	30	20	34 ²	40	20	20	29 ²	—	—	—	—
Arden	30	25	5	27	60	35	25	45	40	30	10	36	20	10	10	17
Glenella	30	17	13	22 ²	40	10	30	29 ²	35	20	15	28 ²	30	15	15	22 ³
Kelwood	25	15	10	21	60	35	25	42	35	25	10	29	—	—	—	10
Plumas	25	20	5	22	35	30	5	33	40	30	10	34	25	20	5	22 ²
<i>Towns</i>																
Austin	25	20	5	23 ²	38	30	8	35 ²	35	20	15	28 ²	20	17	3	19 ¹
Rapid City	30	25	5	27 ²	60	40	20	50 ²	50	30	20	37 ²	25	20	5	23 ¹
McCreary	25	20	5	24	50	40	10	43	40	25	15	32	30	15	15	22 ²
<i>Greater Towns</i>																
Erickson	30	15	15	25	50	30	20	42	35	25	10	32	30	15	15	21 ⁴
Treherne	30	25	5	26	65	40	25	48	35	20	15	30	30	15	15	21
MacGregor	32	20	12	24	37	27	10	31	33	25	8	28	22	15	7	19 ²
Carberry	30	23	7	27 ²	60	35	25	49 ²	50	25	25	37 ²	25	15	10	19 ²
Gladstone	30	18	12	23	35	30	5	32	35	20	15	28	30	10	20	20
Minnedosa	28	18	10	23	50	20	30	41	40	25	15	33	30	19	11	22 ⁴
Neepawa	28	20	8	24	50	40	10	47	40	20	20	32	20	15	5	17
<i>Cities</i>																
Brandon	26	18	8	24 ²	50	35	15	45 ²	35	20	15	31 ²	20	12	8	17 ²
																9 ²

¹Three-Year Average²Five-Year Average³Two-Year Average⁴Four-Year Average

Protein Content

The percentage of protein contained in hard red spring wheat has become more important in the grading and marketing of wheat. Regulations under the new Canada Grain Act incorporate protein content in the new grading system. While there are other quality factors to consider, protein content is closely watched by millers and bakers.

The top grades of Western Canadian wheat have always commanded a premium in world markets, mainly because of the quality of the protein. Unfortunately, a mere percentage designation tells nothing about the quality which appears to be related to genetic-ecological factors of wheat production. Thus a 13.1 per cent protein wheat of a certain variety from a certain production area could be superior to a 13.9 per cent protein wheat of a different variety produced in another country.

The protein percentage of Canadian wheat is highly variable from region to region and from year to year. This is well illustrated in Table 19.

For the study area as a whole, the average protein content varied from 13.7 per cent in 1964 to 13.4 per cent in 1970. The range varied from 11.4 per cent to 16.2 per cent in 1964 and from 11.0 per cent to 16.4 per cent in 1970.

TABLE 19. PROTEIN CONTENT OF HARD RED SPRING WHEAT, BY DELIVERY POINT, 1964-1970

Delivery Point	1964			1965			1966			1967			1968			1969			1970		
	Average	Range	Percent	Average	Range	Percent	Average	Range	Percent	Average	Range	Percent	Average	Range	Percent	Average	Range	Percent	Average	Range	Percent
<i>Too Small to Classify</i>																					
Rufford	14.1	13.5-14.6	-	-	-	-	-	-	-	12.5	11.5-14.0	-	-	-	-	-	-	-	-		
Colby	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Rignold	13.5	11.9-14.3	12.6	12.3-12.8	-	-	-	-	-	13.4	12.3-14.8	-	-	-	-	-	-	-	-		
Howden	14.1	12.9-14.8	-	-	-	-	-	-	-	12.4	11.5-12.9	14.1	13.1-16.1	13.2	12.2-13.8	-	-	-	-		
Springhill	14.1	13.8-14.8	11.7	9.4-13.8	-	-	-	-	-	11.6	10.6-12.7	-	-	-	-	-	-	-	-		
Fairview	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Golden Stream	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Tenby	14.7	13.5-16.2	13.7	12.9-15.0	-	-	-	-	-	14.2	12.4-16.2	14.5	13.8-15.4	13.9	13.1-14.5	-	-	-	-		
<i>Hamlets</i>																					
Cordova	14.4	13.3-15.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Gregg	-	-	-	-	-	-	-	-	-	12.6	11.2-13.3	-	-	-	-	-	-	-	-		
Mentmore	14.9	14.3-15.3	-	-	-	-	-	-	-	12.6	10.1-14.3	13.4	13.0-14.1	-	-	-	-	-	-		
Oberon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Moorepark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Beaver	13.7	13.3-14.5	12.7	12.5-12.9	-	-	-	-	-	12.2	11.0-13.4	-	-	-	-	-	-	-	-		
Firdale	13.7	12.6-14.9	13.4	12.2-14.1	-	-	-	-	-	13.1	11.5-14.8	-	-	-	-	-	-	-	-		
Katrim	12.7	11.3-14.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Ingelow	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Edwin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Justice	13.9	12.8-14.6	12.9	12.8-13.2	13.7	13.2-13.9	13.0	11.5-14.8	-	-	-	-	-	-	-	-	-	-	-		
Heiston	13.4	12.4-14.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Bethany	-	-	-	-	-	-	-	-	-	12.4	11.2-14.2	-	-	-	-	-	-	-	-		
Franklin	13.6	13.1-14.3	-	-	-	-	-	-	-	10.3	9.3-10.9	-	-	-	-	-	-	-	-		
Birnie	13.0	12.4-14.0	-	-	-	-	-	-	-	12.5	11.5-13.4	-	-	-	-	-	-	-	-		
Forrest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Macdonald	12.8	11.7-13.7	-	-	-	-	-	-	-	13.3	13.1-13.6	13.5	12.0-15.4	-	-	-	-	-	-		
Wellwood	-	-	-	-	-	-	-	-	-	13.2	12.0-14.4	12.1	11.0-14.2	12.9	11.0-14.3	14.5	14.0-15.2	13.2	12.1-14.4		
<i>Villages</i>																					
Riding Mountain	12.8	12.4-13.2	13.1	12.0-13.9	-	-	-	-	-	11.5	10.5-12.8	12.8	11.4-13.6	-	-	-	-	-	13.7	12.1-15.1	
Rossdale	13.5	12.7-14.2	14.4	14.1-14.9	-	-	-	-	-	12.6	11.3-13.2	-	-	-	-	-	-	-	-		
Clanwilliam	13.3	11.5-14.7	12.0	11.8-12.5	-	-	-	-	-	13.5	13.1-13.8	13.0	11.6-14.2	-	-	-	-	-	-		
Basswood	13.1	12.5-13.5	13.2	12.2-14.6	-	-	-	-	-	12.7	11.2-14.9	-	-	-	-	-	-	-	-		
Sidney	13.6	11.9-15.5	-	-	-	-	-	-	-	13.3	12.7-13.7	12.3	11.7-12.9	-	-	-	-	-	-		
Douglas	14.1	12.2-15.1	13.3	12.4-13.7	13.3	11.0-14.6	-	-	-	13.7	10.8-17.5	11.9	11.1-12.9	13.0	13.0-13.1	12.6	12.3-12.9	-	-		
Eden	14.0	12.5-15.2	12.9	11.9-13.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.4	12.8-14.0	
Brookdale	-	-	13.4	13.0-13.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Westbourne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Arden	-	-	13.6	13.2-13.9	13.4	11.9-14.7	11.8	11.0-13.1	-	-	-	-	-	-	-	-	-	-	-	-	
Glenella	14.6	14.0-15.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Kelowna	13.2	12.2-14.9	12.9	12.0-14.4	-	-	-	-	-	14.6	14.1-15.3	12.0	9.3-13.6	13.7	11.2-14.8	12.8	11.2-15.6	-	-		

TABLE 91. PROTEIN CONTENT OF HARD RED SPRING WHEAT, BY DELIVERY POINT, 1964-1970 (concluded)

Delivery Point	1964			1965			1966			1967			1968			1969			1970		
	Average		Range	Average		Range	Average		Range	Average		Range	Average		Range	Average		Range	Average		Range
	Percent		Percent	Percent		Percent	Percent		Percent	Percent		Percent	Percent		Percent	Percent		Percent	Percent		Percent
<i>Towns</i>																					
Austin	13.1	12.5-13.5	13.1	12.2-14.4	—	—	13.1	12.7-14.0	13.1	11.9-13.7	—	—	—	—	—	—	—	—	14.4	13.5-15.6	
Rapid City	14.1	13.3-15.1	13.1	12.1-13.6	13.1	12.4-15.5	14.1	12.4-15.5	14.2	13.3-14.8	13.4	12.0-14.4	14.8	13.1-15.9	14.3	12.5-16.4	—	—	—	—	
McCreary	14.5	13.1-16.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
<i>Greater Towns</i>																					
Erickson	11.7	11.4-12.1	12.4	11.9-13.2	—	—	—	—	—	12.4	10.9-15.0	11.7	11.3-11.9	11.6	9.7-13.1	13.4	13.2-13.5	—	—	—	
Tréherne	13.6	13.0-14.3	—	—	—	—	—	—	—	13.4	11.8-15.0	13.7	12.1-15.0	—	—	—	—	—	—	13.2	11.9-14.7
MacGregor	13.3	11.6-14.2	—	—	—	—	—	—	—	13.5	12.2-15.2	13.4	12.8-14.3	13.4	11.0-16.4	—	—	—	—	—	—
Carberry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gladstone	14.8	14.1-15.2	13.4	12.9-13.7	—	—	—	—	—	14.0	12.2-15.3	13.2	12.4-13.6	—	—	—	—	—	—	13.2	12.2-14.3
Minnedosa	14.9	14.2-15.7	13.6	13.5-13.7	—	—	—	—	—	12.5	11.1-14.0	12.6	10.6-14.7	12.5	11.1-13.4	12.9	12.3-14.5	—	—	—	
Neepawa	13.9	12.1-15.4	13.4	12.5-14.1	—	—	—	—	—	13.9	11.6-17.8	12.5	10.8-14.2	—	—	—	—	—	—	13.4	12.4-15.1
<i>Cities</i>																					
Brandon	13.3	12.9-13.6	14.0	13.3-14.4	13.3	11.9-15.3	12.5	11.0-13.6	13.9	12.6-16.2	14.2	12.6-15.2	14.2	12.8-15.5	—	—	—	—	—	—	—
Study Area Total	13.7	11.4-16.2	13.2	9.4-15.6	13.5	11.0-15.5	12.9	9.3-17.8	13.1	9.3-16.2	13.7	9.7-16.4	13.4	11.0-16.4	—	—	—	—	—	—	—
Province of Manitoba	14.0	10.3-17.5	13.2	9.4-19.2	13.0	9.4-16.6	12.9	9.1-18.5	13.4	9.3-17.5	13.5	9.5-17.1	13.3	9.7-17.3	—	—	—	—	—	—	—

Average weighted by number of samples; 3 or more samples used.

Source: Canada Grain Commission.

Prairie Farm Assistance Act Payments, 1939-1969

The map following (figure D) shows a rough outline of the land tributary to each of the delivery points in the study area. The numbers represent the number of times PFAA payments were made to producers in the 31 year period from 1939 to 1969. A value of 6, however, does not mean that all farmers in the township received payments in 6 years out of the 31 but that some farmers did. Thus, the map gives an indication of crop failure frequency in the hinterlands of the study area.

The maximum number of times that payments were made to producers in any one township was 15 times. These payments were made around the delivery point of Glenella.

The number of payments in a particular area seems once again to show the relationship between soils and crops.

As the west side of the study area, where soils are generally fairly good, the number of payments is relatively low in comparison to the rest of the area. The greatest number of payments were made in the northern sector of the region, where the soils are not that good for crop production.

Farm Size

The average size of farm in the study area was generally slightly larger in 1968-69 than in 1962-63 increasing from a mean of 434 acres in 1962-63 to 509 acres in 1968-69. All the delivery points in the area had slight increases in average or mean farm size. Ingelow had the largest increase, from a mean of 500 acres in 1962-63 to a mean of 738 acres in 1968-69. The smallest increase, of 9 acres, was at Edwin.

As the number of farms in the study area decreased, from 5,199 to 4,532 farms, and the average farm size increased, it is apparent that this area is following the general prairie trend, that of fewer but larger farms.

As the average farm size can change substantially by a large shift at either end of the size scale, the median size is perhaps a better indicator of farm size changes. The median size has half the number of farms smaller than it, and half larger. The farms have been grouped to 160 acres intervals and the group is denoted by the mid-point of its interval (Table 21).

PRAIRIE FARM ASSISTANCE ACT PAYMENTS 1939-1969

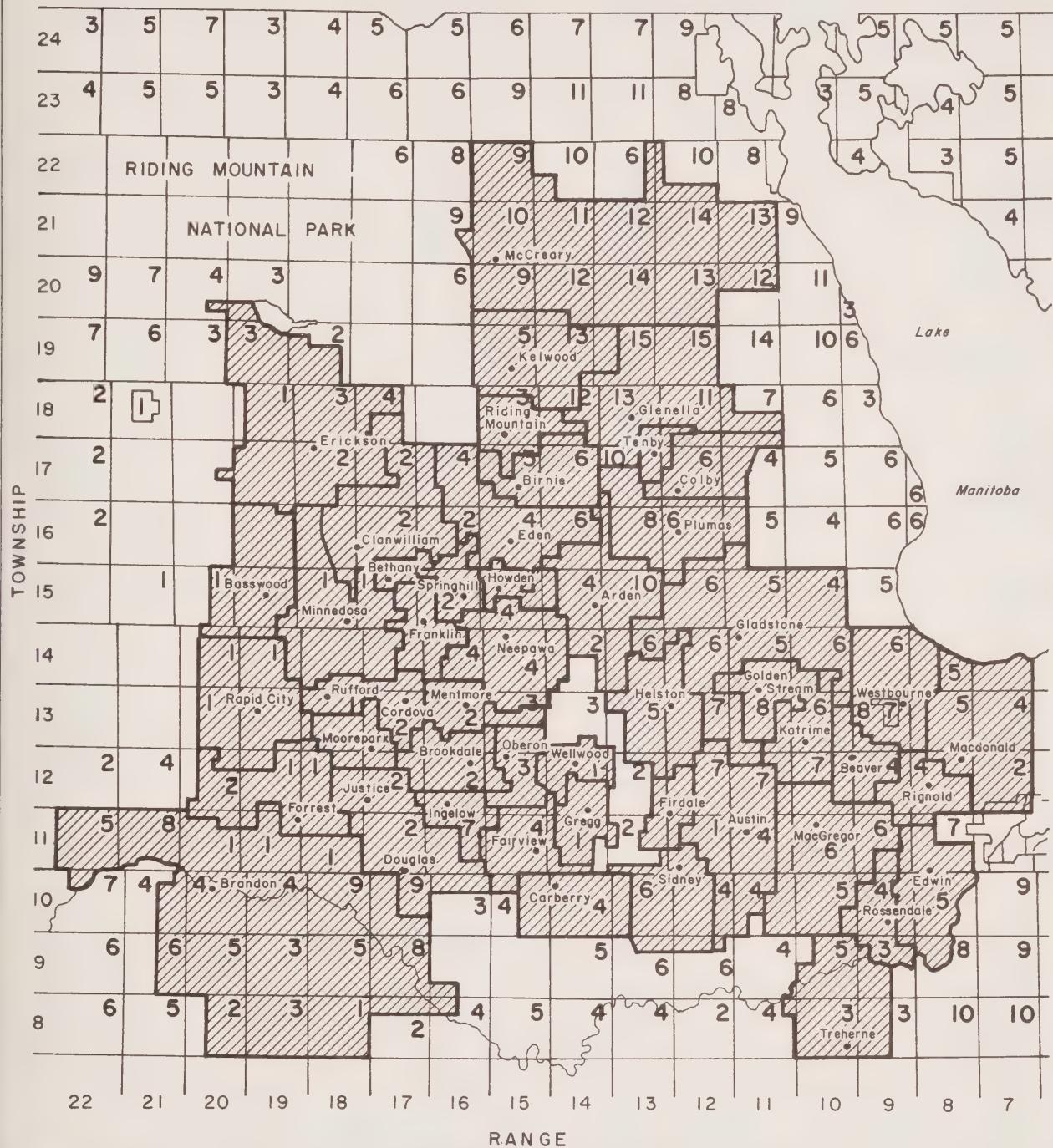


FIGURE D

TABLE 20. AVERAGE ACREAGE OF GRAIN FARMS IN THE STUDY AREA, 1962-63 AND 1968-69

Delivery Point	1962-63	1968-69
<i>Too Small to Classify</i>		
Rufford		
Number of Farms	31	
	— acres —	
Mean	432	Closed
Median	320	
Modal Size	320	
Maximum	960	
Minimum	160	
Colby		
Number of Farms	86	82
	— acres —	
Mean	372	448
Median	320	320
Modal Size	320	160,320
Maximum	1,440	1,280
Minimum	80	80
Rignold		
Number of Farms	50	39
	— acres —	
Mean	424	515
Median	400	400
Modal Size	160,480	320
Maximum	1,195	1,520
Minimum	160	80
Howden		
Number of Farms	51	21
	— acres —	
Mean	316	387
Median	320	320
Modal Size	320	320
Maximum	1,360	1,360
Minimum	80	160
Springhill		
Number of Farms	50	54
	— acres —	
Mean	348	428
Median	302	320
Modal Size	160	160
Maximum	1,440	3,860
Minimum	20	80

TABLE 20. AVERAGE ACREAGE OF GRAIN FARMS IN THE STUDY AREA, 1962-63 AND 1968-69 (continued)

Delivery Point	1962-63	62-63	1968-69
Fairview			
Number of Farms	56		52
		— acres —	
Mean	469		547
Median	480		480
Modal Size	320,480		320
Maximum	1,280		1,600
Minimum	80		152
Golden Stream			
Number of Farms	34		46
		— acres —	
Mean	387		423
Median	320		320
Modal Size	320		160
Maximum	1,120		1,160
Minimum	80		40
Tenby			
Number of Farms	59		38
		— acres —	
Mean	372		475
Median	320		480
Modal Size	320		320
Maximum	800		1,170
Minimum	130		148
<i>Hamlets</i>			
Cordova			
Number of Farms	42		34
		— acres —	
Mean	387		452
Median	320		480
Modal Size	320		480
Maximum	640		640
Minimum	110		160
Gregg			
Number of Farms	52		51
		— acres —	
Mean	484		526
Median	455		480
Modal Size	320		480
Maximum	1,280		1,600
Minimum	160		160

TABLE 20. AVERAGE ACREAGE OF GRAIN FARMS IN THE STUDY AREA, 1962-63 AND 1968-69 (continued)

Delivery Point	1962-63	1968-69
Mentmore		
Number of Farms	44	35
	— acres —	
Mean	511	622
Median	480	640
Modal Size	320	480
Maximum	1,120	1,280
Minimum	160	160
Oberon		
Number of Farms	33	33
	— acres —	
Mean	430	527
Median	320	480
Modal Size	320	480
Maximum	1,100	960
Minimum	160	160
Moorepark		
Number of Farms	59	62
	— acres —	
Mean	397	446
Median	320	457
Modal Size	320	320,480
Maximum	1,000	1,120
Minimum	40	154
Beaver		
Number of Farms	39	29
	— acres —	
Mean	403	498
Median	360	480
Modal Size	320	800
Maximum	960	960
Minimum	160	80
Firdale		
Number of Farms	58	49
	— acres —	
Mean	402	466
Median	320	427
Modal Size	320	320
Maximum	880	1,440
Minimum	80	53

TABLE 20. AVERAGE ACREAGE OF GRAIN FARMS IN THE STUDY AREA, 1962-63 AND 1968-69 (continued)

Delivery Point	1962-63	1968-69
Katrime		
Number of Farms	116	73
	— acres —	
Mean	431	507
Median	320	480
Modal Size	320	320
Maximum	1,440	1,730
Minimum	80	135
Ingelow		
Number of Farms	20	21
	— acres —	
Mean	500	738
Median	480	640
Modal Size	640	480
Maximum	960	1,760
Minimum	160	160
Edwin		
Number of Farms	69	65
	— acres —	
Mean	411	420
Median	320	320
Modal Size	320	320
Maximum	1,210	1,290
Minimum	14	80
Justice-Douglas		
Number of Farms	107	85
	— acres —	
Mean	598	731
Median	480	480
Modal Size	320	320
Maximum	4,480	3,840
Minimum	100	80
Helston		
Number of Farms	91	91
	— acres —	
Mean	473	543
Median	320	480
Modal Size	320	480
Maximum	3,520	3,160
Minimum	160	105

TABLE 20. AVERAGE ACREAGE OF GRAIN FARMS IN THE STUDY AREA, 1962-63 AND 1968-69 (continued)

Delivery Point	1962-63	1968-69
Bethany		
Number of Farms	28	23
	— acres —	
Mean	453	492
Median	320	480
Modal Size	320	320,480
Maximum	1,760	1,370
Minimum	160	160
Franklin		
Number of Farms	85	65
	— acres —	
Mean	397	440
Median	320	431
Modal Size	320	320
Maximum	800	1,120
Minimum	160	160
Birnie		
Number of Farms	86	67
	— acres —	
Mean	462	527
Median	480	480
Modal Size	480	320
Maximum	1,120	1,440
Minimum	160	160
Forrest		
Number of Farms	116	98
	— acres —	
Mean	457	483
Median	466	471
Modal Size	320	320
Maximum	1,920	2,180
Minimum	80	155
Macdonald		
Number of Farms	21	65
	— acres —	
Mean	536	556
Median	480	480
Modal Size	480	480
Maximum	1,120	1,280
Minimum	158	50

TABLE 20. AVERAGE ACREAGE OF GRAIN FARMS IN THE STUDY AREA, 1962-63 AND 1968-69 (continued)

Delivery Point	1962-63	1968-69
Wellwood		
Number of Farms	50	43
	— acres —	
Mean	459	506
Median	400	480
Modal Size	320	320
Maximum	960	960
Minimum	154	80
Villages		
Riding Mountain		
Number of Farms	61	60
	— acres —	
Mean	359	448
Median	320	320
Modal Size	160	160
Maximum	3,420	4,220
Minimum	160	60
Rossendale		
Number of Farms	70	55
	— acres —	
Mean	411	434
Median	320	320
Modal Size	160	320
Maximum	1,440	1,440
Minimum	115	80
Clanwilliam		
Number of Farms	211	181
	— acres —	
Mean	344	374
Median	320	320
Modal Size	160	320
Maximum	1,360	1,200
Minimum	26	80
Basswood		
Number of Farms	109	97
	— acres —	
Mean	437	508
Median	350	480
Modal Size	320	320
Maximum	1,200	1,600
Minimum	40	40

TABLE 20. AVERAGE ACREAGE OF GRAIN FARMS IN THE STUDY AREA, 1962-63 AND 1968-69 (continued)

Delivery Point	1962-63	1968-69
Sidney		
Number of Farms	76	55
	— acres —	
Mean	661	770
Median	480	640
Modal Size	480	320
Maximum	3,040	2,567
Minimum	40	10
Eden		
Number of Farms	173	151
	— acres —	
Mean	339	397
Median	320	320
Modal Size	320	320
Maximum	1,120	1,600
Minimum	8	40
Brookdale		
Number of Farms	99	82
	— acres —	
Mean	550	570
Median	480	554
Modal Size	320,480	640
Maximum	1,600	1,440
Minimum	100	100
Westbourne	.	
Number of Farms	37	54
	— acres —	
Mean	694	718
Median	475	540
Modal Size	320	320,640
Maximum	5,060	5,620
Minimum	80	80
Arden		
Number of Farms	141	118
	— acres —	
Mean	481	552
Median	320	480
Modal Size	320	320,640
Maximum	4,354	5,406
Minimum	30	30

TABLE 20. AVERAGE ACREAGE OF GRAIN FARMS IN THE STUDY AREA, 1962-63 AND 1968-69 (continued)

Delivery Point	1962-63	1968-69
Glenella		
Number of Farms	224	157
	— acres —	
Mean	381	512
Median	320	470
Modal Size	320	320
Maximum	1,440	5,961
Minimum	54	160
Kelwood		
Number of Farms	178	146
	— acres —	
Mean	364	412
Median	320	320
Modal Size	160	160
Maximum	2,240	1,280
Minimum	7	62
Plumas		
Number of Farms	128	115
	— acres —	
Mean	433	498
Median	320	480
Modal Size	320	320
Maximum	1,600	1,600
Minimum	80	30
Towns		
Austin		
Number of Farms	151	137
	— acres —	
Mean	440	499
Median	320	320
Modal Size	320	320
Maximum	2,080	4,140
Minimum	124	20
Rapid City		
Number of Farms	135	107
	— acres —	
Mean	435	513
Median	320	480
Modal Size	320	640
Maximum	1,550	1,440
Minimum	100	100

TABLE 20. AVERAGE ACREAGE OF GRAIN FARMS IN THE STUDY AREA, 1962-63 AND 1968-69 (continued)

Delivery Point	1962-63	1968-69
McCreary		
Number of Farms	283	260
	— acres —	
Mean	336	413
Median	320	320
Modal Size	320	320
Maximum	1,120	1,760
Minimum	5	80
Greater Towns		
Erickson		
Number of Farms	201	197
	— acres —	
Mean	393	457
Median	320	320
Modal Size	160	160
Maximum	3,490	4,640
Minimum	60	10
Treherne		
Number of Farms	205	182
	— acres —	
Mean	384	446
Median	320	320
Modal Size	320	320
Maximum	1,940	1,940
Minimum	65	60
MacGregor		
Number of Farms	179	140
	— acres —	
Mean	432	494
Median	400	480
Modal Size	320	640
Maximum	1,280	1,865
Minimum	42	16
Carberry		
Number of Farms	77	55
	— acres —	
Mean	580	746
Median	480	640
Modal Size	480	800
Maximum	3,105	1,920
Minimum	20	60

TABLE 20. AVERAGE ACREAGE OF GRAIN FARMS IN THE STUDY AREA, 1962-63 AND 1968-69 (concluded)

Delivery Point	1962-63	1968-69
Gladstone		
Number of Farms	249	215
	— acres —	
Mean	450	552
Median	325	480
Modal Size	320	320
Maximum	3,440	3,440
Minimum	40	70
Minnedosa		
Number of Farms	142	156
	— acres —	
Mean	493	566
Median	480	480
Modal Size	320	320
Maximum	2,080	1,600
Minimum	144	119
Neepawa		
Number of Farms	160	135
	— acres —	
Mean	404	497
Median	320	480
Modal Size	320	320
Maximum	2,010	2,440
Minimum	7	48
<i>Cities</i>		
Brandon		
Number of Farms	377	356
	— acres —	
Mean	547	643
Median	480	480
Modal Size	320	320
Maximum	6,240	6,664
Minimum	41	10
Study Area Total		
Number of Farms	5,199	4,532
	— acres —	
Mean	434	509
Median	320	480
Modal Size	320	320
Maximum	6,240	6,664
Minimum	5	10

Source: Canadian Wheat Board.

TABLE 21. DISTRIBUTION OF GRAIN FARM SIZES, CROP YEARS, 1962-63 AND 1968-69

Size Group (Acres)	1962-63		1968-69	
	No. of Farms	Percent of Total	No. of Farms	Percent of Total
1 - 240	1,234	23.73	907	20.01
241 - 400	1,756	33.77	1,243	27.43
401 - 560	1,057	20.33	902	19.90
561 - 720	600	11.54	681	15.02
721 - 880	261	5.02	354	7.81
881 - 1,040	134	2.58	183	4.04
1,041 - 1,200	65	1.25	97	2.14
1,201 - 1,360	35	0.67	57	1.26
1,361 - 1,520	15	0.29	31	0.68
1,521 - 1,680	11	0.21	25	0.55
1,681 - 1,840	5	0.10	13	0.29
1,841 - 2,000	4	0.08	9	0.20
2,001 - 2,160	3	0.06	3	0.07
2,161 - 2,320	3	0.06	4	0.09
2,321 - 2,480	2	0.04	3	0.07
2,481 - 2,640	0	0.00	1	0.02
2,641 - 2,800	1	0.02	0	.00
2801 and Over	13	0.25	19	0.42
Study Area Total	5,199	100.00	4,532	100.00

Source: Canadian Wheat Board.

Within size groups, the greatest decrease in number of farms between 1962-63 and 1968-69 was in the 241 to 400 acres class. Decreases in the number of farms were general in the three groups 1 to 240, 241 to 400 and 401 to 560 acres. This is shown in Figure E. For easier plotting of the graph, farm sizes of 1,760 acres and over were grouped together in the size group 1760 acres and over. The graph shows clearly that in 1962-63 there were more smaller farms in the study area than in 1968-69 and that there were fewer but larger farms in 1968-69 than in 1962-63.

Land Tenure

In the Brandon-Neepawa region the general trend between 1962-63 and 1968-69 was for a greater proportion of land to be owned by the operator, rather than rented. For the study area, the proportion of owned land increased from 79 per cent in 1962-63 to 81 per cent in 1968-69. The size of the elevator service centre appears to have little significant effect upon the distribution of the land between ownership and rental basis, although a weak pattern of more rented land in the hinterlands surrounding the larger communities is discernible.

DISTRIBUTION OF GRAIN FARM SIZES IN THE STUDY AREA, CROP YEARS 1962-63 AND 1968-69

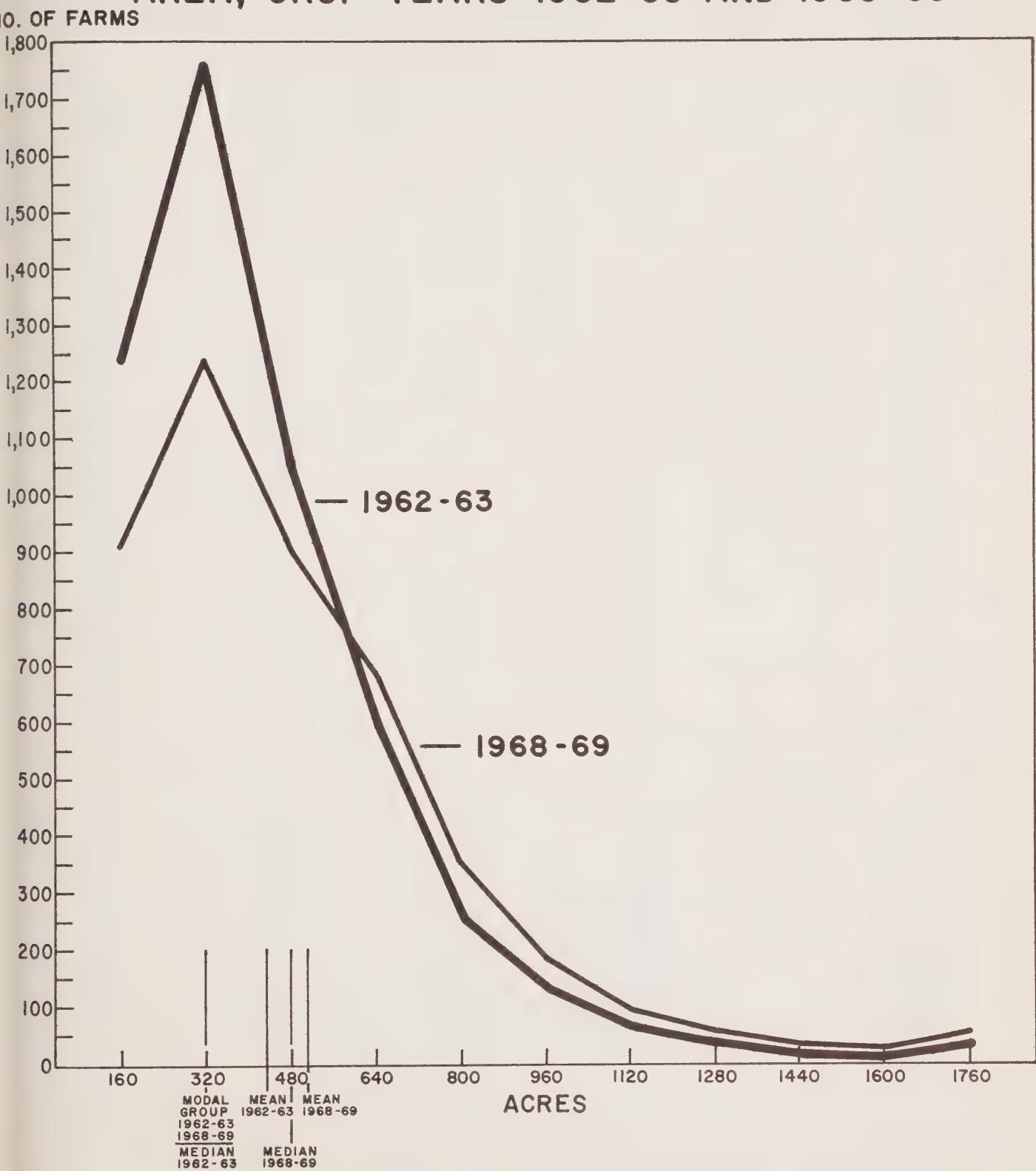


FIGURE E

TABLE 22. LAND TENURE OF GRAIN FARMS, BY DELIVERY POINT, 1962-63 AND 1968-69

Delivery Point	Percent Owned		Percent Rented	
	1962-63	1968-69	1962-63	1968-69
<i>Too Small to Classify</i>				
Rufford	84.5	Closed	15.5	Closed
Colby	85.1	77.0	14.9	23.0
Rignold	66.4	72.7	33.6	27.3
Howden	75.2	83.2	24.8	16.8
Springhill	81.0	91.4	19.0	8.6
Fairview	81.4	77.9	18.6	22.1
Golden Stream	75.6	81.0	24.4	19.0
Tenby	81.6	91.1	18.4	8.9
<i>Hamlets</i>				
Cordova	70.1	86.9	29.9	13.1
Gregg	74.4	74.2	25.6	25.8
Mentmore	87.2	85.3	12.8	14.7
Oberon	79.4	72.9	20.6	27.1
Moorepark	75.8	81.1	24.2	18.9
Beaver	84.1	80.0	15.9	20.0
Firdale	82.7	82.5	17.3	17.5
Katrime	78.9	80.2	21.1	19.8
Ingelow	84.3	53.8	15.7	46.2
Edwin	71.9	77.1	28.1	22.9
Justice-Douglas	79.8	74.2	20.2	25.8
Helston	79.1	83.2	20.9	16.8
Bethany	82.7	90.1	17.3	9.9
Franklin	80.7	86.0	19.3	14.0
Birnie	87.1	77.9	12.9	22.1
Forrest	77.2	81.8	22.8	18.2
Macdonald	64.4	69.9	35.6	30.1
Wellwood	82.8	85.7	17.2	14.3
<i>Villages</i>				
Riding Mountain	89.8	90.4	10.2	9.6
Rosendale	75.3	90.3	24.7	9.7
Clanwilliam	81.2	85.2	18.8	14.8
Basswood	72.2	81.7	27.8	18.3
Sidney	68.6	68.6	31.4	31.4
Eden	75.0	78.4	25.0	21.6
Brookdale	71.9	79.0	28.1	21.0
Westbourne	90.7	89.1	9.3	10.9
Arden	79.2	84.3	20.8	15.7
Glenella	82.9	87.5	17.1	12.5
Kelwood	84.3	87.0	15.7	13.0
Plumas	87.9	85.6	12.1	14.4

TABLE 22. LAND TENURE OF GRAIN FARMS, BY DELIVERY POINT, 1962-63 AND 1968-69 (concluded)

Delivery Point	Percent Owned		Percent Rented	
	1962-63	1968-69	1962-63	1968-69
<i>Towns</i>				
Austin	79.9	83.8	20.1	16.2
Rapid City	82.5	82.1	17.5	17.9
McCreary	84.6	87.2	15.4	12.8
<i>Greater Towns</i>				
Erickson	79.9	79.3	20.1	20.7
Treherne	71.1	78.5	28.9	21.5
MacGregor	83.8	87.1	16.2	12.9
Carberry	68.8	79.1	31.2	20.9
Gladstone	86.6	85.7	13.4	14.3
Minnedosa	64.4	76.8	35.6	23.2
Neepawa	80.5	82.6	19.5	17.4
<i>Cities</i>				
Brandon	73.1	76.9	26.9	23.1
Study Area Total	78.7	81.4	21.3	18.6

Source: The Canadian Wheat Board.

PART III

GRAIN MARKETING CHARACTERISTICS

Delivery Permit Books Issued

The number of permit holders in the study area decreased from 5,199 in 1962-63 to 4,522 in 1969-70 (Table 23). Only nine of the forty-nine points under review showed an increase in permit books issued; but these increases were only by one or two in most cases. Riding Mountain increased by six; from 61 to 67 permits and Westbourne increased by 5 from 37 to 42 permits. The only significant increases were seen at Brandon which went from 377 to 399 permits, and at Macdonald which rose from 21 to 76 permits. This increase is due to the fact that the United Grain Growers elevator was moved from Cawdor to Westbourne and as a result some farmers who used to deliver to Cawdor switched to Macdonald. The Pool elevator at Longburn amalgamated with that at Macdonald in 1965-66, so that the increase in the number of permit holders at this latter point is more apparent than real. In addition, however, in recent crop years there seems to be evidence of some farmers switching from Westbourne to Macdonald. Rufford closed in 1968-69. Proportionately the small communities lost more than large communities.

Canadian Wheat Board Initial Payments

The Canadian Wheat Board pooling system of merchandising the producers' wheat, durum, oats and barley uses an initial payment on delivery of the grain to the primary country elevator plus a prorated distribution of what has accumulated in the pool when it is closed.

The initial payment levels depend on what the federal cabinet has set as the basic initial payments, basis in store Thunder Bay terminal elevators. From these must be deducted the appropriate amounts to account for the grade of grain, the railway freight rate from the delivery point to the terminal elevators and the elevator company's charge for handling the grain. The remainder is what the producer receives and in Table 24 is called the "street price".

The main variable is the railway freight rate, inasmuch as the grade spreads and the elevator charges are the same at all delivery points in any one crop year. Accordingly if the freight rate is known then the street price can be determined by reference to a short table.

TABLE 23. DELIVERY PERMIT BOOKS ISSUED, BY DELIVERY POINT, 1962-63 TO 1969-70

Delivery Point	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
<i>Too Small to Classify</i>								
Rufford	31	29	31	29	30	25	Closed	
Colby	86	80	82	84	87	83	82	78
Rignold	50	49	45	47	48	43	39	43
Howden	51	54	48	30	20	20	21	23
Springhill	50	50	57	63	67	62	54	51
Fairview	56	52	49	50	52	50	52	54
Golden Stream	34	33	31	30	35	44	46	49
Tenby	59	54	52	54	45	38	38	38
<i>Hamlets</i>								
Cordova	42	43	42	41	38	33	34	31
Gregg	52	53	56	54	51	51	51	53
Mentmore	44	44	41	37	36	34	35	37
Oberon	33	31	30	32	31	33	33	35
Moorepark	59	55	54	56	56	59	62	60
Beaver	39	36	34	33	33	32	29	36
Firdale	58	56	55	54	53	49	49	52
Katrime	116	110	111	105	96	76	73	71
Ingelow	20	19	17	22	24	26	21	22
Edwin	69	68	72	65	65	69	65	60
Justice-Douglas	107	102	100	93	85	84	85	84
Helston	91	92	90	92	96	90	91	87
Bethany	28	26	26	23	23	24	23	24
Franklin	85	78	81	78	68	67	65	63
Birnie	86	83	74	73	69	67	67	64
Forrest	116	116	100	99	94	93	98	100
Macdonald	21	26	32	60	63	64	65	76
Wellwood	50	48	47	47	47	43	43	39
<i>Villages</i>								
Riding Mountain	61	53	49	47	50	61	60	67
Rossendale	70	68	62	64	61	55	55	58
Clanwilliam	211	206	207	201	185	174	181	173
Basswood	109	109	103	101	100	97	97	97
Sidney	76	70	68	64	65	59	55	48
Eden	173	175	161	161	159	155	151	157
Brookdale	99	100	99	94	87	86	82	74
Westbourne	37	63	57	55	56	49	54	42
Arden	141	133	134	127	127	124	118	106
Glenella	224	221	210	201	185	158	157	161
Kelwood	178	174	169	175	155	142	146	138
Plumas	128	132	123	128	116	118	115	109
<i>Towns</i>								
Austin	151	153	152	155	135	121	137	112
Rapid City	135	127	122	121	114	109	107	103
McCreary	283	275	273	277	247	256	260	258

TABLE 23. DELIVERY PERMIT BOOKS ISSUED, BY DELIVERY POINT, 1962-63 TO 1969-70 (concluded)

Delivery Point	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
<i>Greater Towns</i>								
Erickson	201	187	188	183	180	193	197	200
Treherne	205	197	194	189	180	181	182	186
MacGregor	179	166	169	160	155	148	140	131
Carberry	77	74	69	67	64	60	55	57
Gladstone	249	235	231	228	216	203	215	214
Minnedosa	142	134	138	136	136	139	156	157
Neepawa	160	155	153	154	143	133	135	145
<i>Cities</i>								
Brandon	377	370	367	360	357	344	356	399
Study Area Total	5,199	5,064	4,955	4,899	4,685	4,524	4,532	4,522

Source: Canadian Wheat Board.

Figure F. is a map showing all delivery points in the Brandon-Neepawa study area and the railway freight rate, by zone, from each point to Thunder Bay. It will be noted that most of the communities lie in the 16¢ per 100 lb. freight rate zone. A few points in the northern and in the extreme western part of the region are in the 17¢ zone. By referring to the map to ascertain the freight rate, the street price for selected grades of wheat, durum, oats and barley can be determined by reference to Table 24. Street prices for three different crop years are included, by zone, in this table.

The differential for the same grain delivered to points in the two different zones is 1/2¢ per bushel for wheat and durum, 1/4¢ per bushel for oats, and 1/2¢ for barley. These spreads would apply to such adjacent delivery points as Glenella and Tenby, Eden and Howden, Springhill and Franklin, Forrest and Justice. A lower freight rate results in a higher street price.

Owner, Age and Capacity of Country Elevators

The owners, the ages and the various storage capacities of all the elevators in the study area is given in Table 25. It is interesting to note that the oldest elevator was constructed in 1895 at Arden. Many others were built in the early 1900's and the average age of elevator is 39 years. It will be noticed from the table that in some cases the annex is older than the elevator. This occurred when a newer and larger elevator was built on to the original.

Storage capacity depicts the potential of a point as a grain collection and distribution centre. However, the actual bushel receipts are the gauge of its prosperity. The number of elevators at a point is a rough approximation also of the degree of competition at a particular point. Generally where there are two or more elevators more than one grain company is represented.

Almost all points had the same number of elevators in 1970-71 as in 1962-63. The exceptions are Rufford, which closed, Forrest which has one less, Minnedosa which has one more, and Brandon which added two. Although only two points increased the number of elevators many places had an increased storage capacity. Minnedosa showed the greatest increase, from 99,000 bushels to 367,000 bushels. The largest single point both in terms of number of elevators and storage capacity is Brandon.

GRAIN FREIGHT RATES TO THUNDER BAY FOR THE BRANDON - NEEPAWA REGION

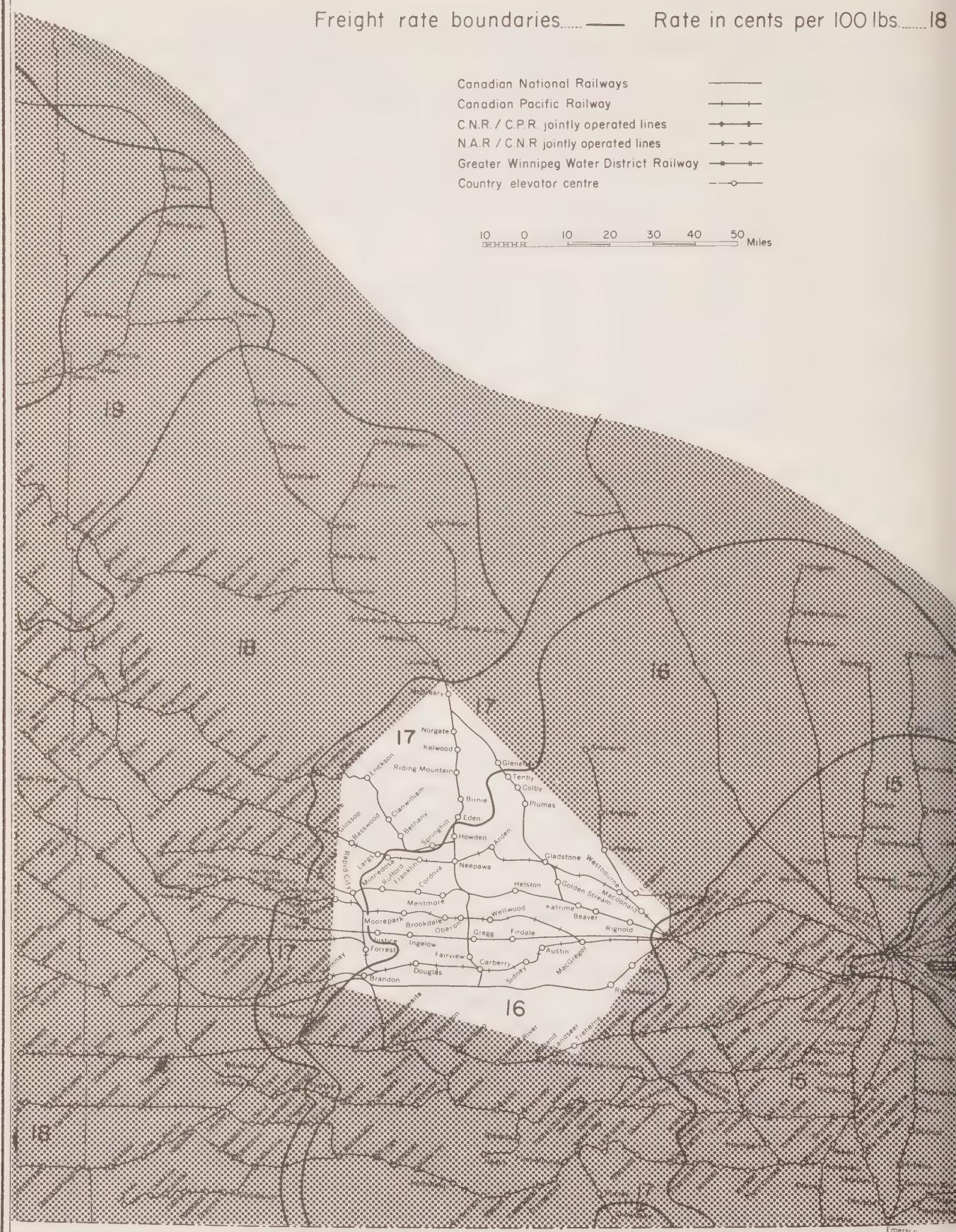


FIGURE F

TABLE 24. CANADIAN WHEAT BOARD NET INITIAL PAYMENTS TO PRODUCERS ("STREET PRICES"), CROP YEARS 1968-69, 1969-70 AND 1970-71

Crop Year	Grain Freight Rates ¹	Wheat			No.2 C.W. Oats	No.1 Feed Oats	No.3 C.W. 6 Row Barley	No.1 Feed Barley			
		No.1 Northern and No.1 C.W.A.D.	No.2 Northern and No.2 C.W.A.D.	No.4 Northern and No.4 C.W.A.D.							
cents/cwt											
					— dollars per bushel —						
1968-69	16	1.54 3/4	1.50 3/4	1.39 3/4	.55 1/4	.50 1/4	.92 3/4	.83 3/4			
	17	1.54 1/4	1.50 1/4	1.39 1/4	.54 7/8	.49 7/8	.92 1/4	.83 1/4			
1969-70	16	1.34 1/2	1.30 1/2	1.17 1/2	.50	.45	.77 1/2	.67 1/2			
	17	1.34	1.30	1.17	.49 5/8	.44 5/8	.77	.67			
1970-71	16	1.34 1/2	1.30 1/2	1.17 1/2	.50	.45	.87 1/2	.77 1/2			
	17	1.34	1.30	1.17	.49 5/8	.44 5/8	.87	.77			

¹ Flaxseed and Rapeseed 1 $\frac{1}{2}$ cents per hundredweight higher.

Source: Canadian Wheat Board.

TABLE 25. COUNTRY ELEVATORS, OWNER, AGE, AND CAPACITY, BY DELIVERY POINT, 1962-63
AND 1970-71

Delivery Point	Elevator Company	Year of Construction		Storage Capacity		
		Elevator	Annex	1962-63	1970-71	
		— year —		— '000 bu. —		
<i>Too Small to Classify</i>						
Rufford	United Grain Growers Ltd.	1910	1940	49	closed	
Colby	Scottish Co-Op Whlse. Soc. Ltd.	1949	1952-53	60	60	
Rignold	United Grain Growers Ltd.	1938	1955	82	82	
Howden	Manitoba Pool Elevators	1903	1940	57	57	
Springhill	Manitoba Pool Elevators	1958		36	36	
Fairview	United Grain Growers Ltd.	1935	1940	93	85	
Golden Stream	Federal Grain Ltd.	1955	1953	34	34	
Tenby	United Grain Growers Ltd.	1917	1954	67	67	
<i>Hamlets</i>						
Cordova	United Grain Growers Ltd.	1910	1940	49	49	
Gregg	Scottish Co-Op Whlse. Soc. Ltd.	1931	1953	90	90	
			1956			
Mentmore	Manitoba Pool Elevators	1927	1958	89	89	
Oberon	Manitoba Pool Elevators	1955	1941	66	66	
Moorepark	Manitoba Pool Elevators A,	1929	1940	53	53	
	Manitoba Pool Elevators B,	1905		26	26	
Beaver	United Grain Growers Ltd.	1935	1958	121	105	
Firdale	National Grain Co. Ltd.	1911	1961	62	—	
	National Grain (1968) Ltd.	1911	1961	—	62	
Katrim	Manitoba Pool Elevators	1953	1953	62	174	
			1969			
Ingelow	National Grain Co. Ltd.	1921	1957	52	—	
	National Grain (1968) Ltd.	1921	1957	—	52	
Edwin	Manitoba Pool Elevators	1928	1941	56	56	
Justice	Manitoba Pool Elevators	1928	1940	101	101	
			1951			
Helston	Manitoba Pool Elevators	1946	1957	103	103	
Bethany	Manitoba Pool Elevators	1900		46	46	
Franklin	Manitoba Pool Elevators A,	1959	1940	111	111	
			1927			
	Manitoba Pool Elevators B,	1939	1940	60	60	
Birnie	Manitoba Pool Elevators	1927		31	31	
Forrest	Manitoba Pool Elevators	1929	1956	163	137	
Macdonald ¹	Manitoba Pool Elevators	1955	1948	36	67	
Wellwood	United Grain Growers Ltd.	1919	1955	115	115	
<i>Villages</i>						
Riding Mountain	United Grain Growers Ltd.	1937	1940	50	50	
Rosendale	United Grain Growers Ltd.	1913	1953	77	77	
Clanwilliam	Inter Ocean Grain Co. Ltd. 1	1908	1940-41	53	53	
	United Grain Growers Ltd.	1901	1955	82	—	
	Inter Ocean Grain Co. Ltd. 2	1901	1955	—	82	
	Manitoba Pool Elevators	1928	1941	102	102	
			1908			

TABLE 25. COUNTRY ELEVATORS, OWNER, AGE, AND CAPACITY, BY DELIVERY POINT, 1962-63
AND 1970-71 (continued)

Delivery Point	Elevator Company	Year of Construction		Storage Capacity	
		Elevator	Annex	1962-63	1970-71
— year —		— '000 bu. —			
Basswood	Manitoba Pool Elevators A,	1926	1969	41	151
	Manitoba Pool Elevators B,	1914		24	24
	Manitoba Pool Elevators C,	1908	1940	35	35
Sidney	Manitoba Pool Elevators	1912	1967	27	37
Douglas	Manitoba Pool Elevators	1937	1968	36	102
Eden	Manitoba Pool Elevators A,	1928	1940	69	69
	Manitoba Pool Elevators B,	1927		27	27
Brookdale	United Grain Growers Ltd.	1927	1940	76	76
			1941		
Westbourne	Manitoba Pool Elevators	1929	1941	96	96
			1952		
	United Grain Growers Ltd.	1938	1940	82	82
			1953		
Arden	United Grain Growers Ltd.	1938	1940	47	78
			1951		
Glenella	Manitoba Pool Elevators A,	1926	1926	63	63
	Manitoba Pool Elevators B,	1895		29	29
Kelwood	Manitoba Pool Elevators	1947	1963	36	98
Plumas	Manitoba Pool Elevators	1929	1968	29	68
	United Grain Growers Ltd.	1927	1940	53	53
	United Grain Growers Ltd. 1	1949	1952	95	95
Austin	United Grain Growers Ltd. 2	1926		29	29
	United Grain Growers Ltd. 3	1905		20	20
<i>Towns</i>					
Austin	Manitoba Pool Elevators	1951	1901	88	88
	Manitoba Pool Elevators	1926	1952	79	79
Rapid City	National Grain Co. Ltd.	1952	1952	48	—
	National Grain (1968) Ltd.	1952	1952	—	48
McCreary	Federal Grain Ltd.	1917	1940	71	71
			1955		
Treherne	United Grain Growers Ltd.	1917	1940	80	80
			1961		
<i>Greater Towns</i>					
Erickson	Manitoba Pool Elevators	1933	1953	117	157
			1966		
Trehern	Searle Grain Co. Ltd.	1955	1918	71	—
	Federal Grain Ltd.	1955	1918	—	71
Treherne	Manitoba Pool Elevators A,	1928	1952	111	109
			1940		
N.M. Paterson & Sons Ltd.	Manitoba Pool Elevators B,	1939	1955	42	42
	N.M. Paterson & Sons Ltd.	1928	1955	52	82
			1968		
			1969		

TABLE 25. COUNTRY ELEVATORS, OWNER, AGE, AND CAPACITY, BY DELIVERY POINT, 1962-63
AND 1970-71 (concluded)

Delivery Point	Elevator Company	Year of Construction		Storage Capacity	
		Elevator	Annex	1962-63	1970-71
		— year —		— '000 bu. —	
	United Grain Growers Ltd.	1927	1952	113	113
			1959		
MacGregor	Manitoba Pool Elevators A	1969	1969	78	129
	Manitoba Pool Elevators B,	1928	1941	53	53
Carberry	United Grain Growers Ltd.	1938	1940	56	56
Gladstone	Manitoba Pool Elevators	1948	1955	223	223
			1960		
	United Grain Growers Ltd.	1918	1957	165	165
Minnedosa	Manitoba Pool Elevators A,	1927	1968	32	131
	Manitoba Pool Elevators B,	1938		39	39
	Manitoba Pool Elevators C,	1903		28	28
	United Grain Growers Ltd.	1966	1967	—	169
Neepawa	Manitoba Pool Elevators	1941	1957	56	56
	United Grain Growers Ltd.	1938	1958	152	152
			1940		
<i>Cities</i>			1940		
Brandon	Federal Grain Ltd. 1	1928		56	56
	Federal Grain Ltd. 2	1958	1955	75	75
	Federal Grain Ltd. 3	1964	1964	—	120
	Manitoba Pool Elevators A,	1928	1948	99	99
	Manitoba Pool Elevators B,	1955	1955	116	116
	McCabe Grain Co. Ltd.	1937	1940	158	148
			1952		
			1955		
	United Grain Growers Ltd.	1963		—	105

¹The former Longburn "B" elevator was moved to Macdonald and the original elevator at Macdonald became the annex.

Source: Canada Grain Commission.

Receipts of Grain

Annual receipts of grain at a particular delivery point are another measure of its relative importance as a grain collection and distribution centre. Receipts for crop years 1962-63 to 1969-70 are presented in Table 26 for each delivery point in the study area. Generally, the larger communities attract the greatest volume of business, reflecting the larger acreages associated with these communities. In the 1969-70 crop year Brandon received over 2 million bushels and over the 8 year period between 1962-63 and 1969-70 Brandon received an average of 1,847,000 bushels per year.

In only 3 instances, namely, Rignold, Macdonald, and Brandon, were receipts in 1969-70 substantially greater than those in 1962-63. Receipts vary considerably from year to year, reflecting such things as crop yields, grain marketing, the associated delivery quotas and the number of permits issued at each point.

The throughput ratio is a rule-of-thumb measurement of the profitability of elevators that are dependent for their income on the volume of grain handled. It is generally accepted that the break-even point lies somewhere between the ratios of three to one and four to one, where the figures refer to the handlings per year and the storage capacity respectively. A further discussion on throughput ratios is found in Part IV.

TABLE 26. RECEIPTS OF GRAIN AT LICENSED ELEVATORS BY DELIVERY POINT 1962-63 TO 1969-70

Delivery Point	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
— '000 bushels —								
<i>Too Small to Classify</i>								
Rufford	94	72	91	81	78	59	Closed	
Colby	305	150	257	271	298	253	286	223
Rignold	143	118	195	254	205	181	173	179
Howden	156	128	135	99	82	71	70	57
Springhill	135	146	177	177	186	175	163	138
Fairview	292	188	216	266	270	193	182	179
Golden Stream	115	52	75	67	69	87	131	127
Tenby	170	86	111	135	107	88	125	94
<i>Hamlets</i>								
Cordova	131	92	111	102	123	105	111	94
Gregg	252	182	215	204	190	126	173	150
Mentmore	200	144	160	145	192	172	158	158
Oberon	164	112	134	172	148	148	112	121
Moorepark	202	144	173	181	196	172	177	183
Beaver	110	88	164	181	147	138	146	176
Firdale	146	89	126	136	100	101	130	104
Katrine	302	177	308	338	233	219	253	230
Ingelow	73	55	62	127	113	95	83	76
Edwin	183	106	161	186	168	163	174	119
Justice	241	205	239	217	172	161	147	134
Helston	299	90	289	302	246	326	327	225
Bethany	86	94	87	85	68	65	60	68
Franklin	336	285	297	276	270	216	179	199
Birnie	248	150	180	152	154	149	173	105
Forrest	509	373	281	279	276	217	165	198
Macdonald	128	70	142	179	178	122	106	148
Wellwood	223	145	176	193	158	127	101	

TABLE 26. RECEIPTS OF GRAIN AT LICENSED ELEVATORS BY DELIVERY POINT 1962-63 TO 1969-70 (concluded)

Delivery Point	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70
— '000 bushels —								
<i>Villages</i>								
Riding Mountain	123	71	99	76	75	133	151	118
Rossmere	165	73	139	174	140	125	141	106
Clanwilliam	558	473	518	480	424	405	357	370
Basswood	431	352	345	357	346	269	249	335
Sidney	163	90	102	126	103	108	120	112
Douglas	185	120	155	210	195	172	214	195
Eden	488	391	419	412	387	373	386	317
Brookdale	579	437	498	531	541	441	355	349
Westbourne	128	76	237	275	189	191	177	136
Arden	450	217	376	375	376	387	416	274
Glenella	542	262	357	397	299	317	475	323
Kelwood	538	275	371	363	258	253	325	205
Plumas	465	220	410	460	379	403	431	298
<i>Towns</i>								
Austin	353	201	324	387	296	290	266	259
Rapid City	463	382	410	378	398	338	308	299
McCreary	603	368	463	452	402	381	516	477
<i>Greater Towns</i>								
Erickson	498	406	351	365	368	381	339	393
Treherne	661	407	540	602	623	569	545	527
MacGregor	388	221	348	470	377	402	435	319
Carberry	263	145	196	235	206	181	152	160
Gladstone	866	290	792	812	704	672	862	673
Minnedosa	468	377	437	426	541	482	528	584
Neepawa	420	324	432	449	452	417	427	423
<i>Cities</i>								
Brandon	1,651	1,252	1,686	2,008	2,173	2,003	1,945	2,361
Study Area Total	16,692	10,971	14,567	15,625	14,679	13,622	14,035	13,199

Source: Canada Grain Commission.

Canadian Wheat Board Specified Acreage

While the use of the Canadian Wheat Board's "specified acreage" concept for grain delivery quota purposes has now been discarded in favour of an assigned acreage concept, Table 27 listing a series of specified acreages for each delivery point in the study area has been retained in this report. It yields some meaningful information concerning the emphasis farmers put on the use of land when faced with a mix of changing market conditions. The evidence seems to point to the mix of delivery quotas exerting an influence on what individual farmers produce.

It will be remembered that specified acreage refers to farm land devoted to the production of cereal crops, together with summerfallow and cultivated forage crops. Excluded are oilseeds, other miscellaneous crops, native pasture and unimproved farm land.

During the study period the specified acreage constituted the general grain delivery base. It was fairly steady at about 70 per cent of total acres over the 1962-63 to 1970-71 period, increasing to 72.7 per cent in 1968-69 but falling back to 68.2 per cent in the 1970-71 crop year. The federal government's Operation Lift, or Wheat Acreage Reduction Program, exerted an influence on the use of land in this latter year.

Noteworthy was the increase in plantings of oilseed crops, which would have removed some land from specified acres. The oilseeds acreage increase was offset by a decrease in unimproved land and an increase in total farm acres. Acreage sown to flaxseed went from 57,764 in 1962-63 to 103,355 in 1970-71. Rapeseed production increased dramatically from only 290 acres to 34,401 acres as already noted in our comments on table 15. These are significant changes for those particular crops but their influence on specified acreage is diluted because of the huge size (2,300,000

acres) of the region's cropland.

In more absolute terms, there was a fairly steady upwards progression in specified acreage, moving from 1,560,909 acres in 1962-63 to 1,692,654 acres in 1969-70. The significant step up during the period came in 1967-68, subsequent to the Canadian Wheat Board's excellent marketing year in 1966-67. The specified acreage moved from 1,572,122 acres to 1,639,626 acres in one year and continued its increase up to 1969-70, when its use as a delivery base was terminated. In spite of this increase in specified acreage, grain deliveries fell off as the per acre quota levels declined. (See Table 29). It may be inferred that the specified acreage was increased in farmer's attempts to build up their grain delivery base in the face of slow moving quota levels. In 1963-64 the specified acreage quota reached 8 bushels per acre plus significant supplementary quota but rose only as far as 4 bushels in 1969-70.

Added detail with respect to the make up of specified acreage is provided in Table 28, which presents a series demonstrating what proportion of the delivery base is made up of what is known as "Board Grains", i.e., wheat, durum, oats and barley. These data point to annual adjustments in production depending on the collective judgment of producers as to the relative demand for the various cereal and oilseed crops.

In the study region the proportion of the respective specified acreages devoted to Wheat Board Grains seldom fell below 50 per cent. Two points, Carberry and Sidney, are exceptions, neither ever having more than 48 per cent seeded to Board grains. Sidney is a sunflower seed area and this takes away from the specified acreage. Other reasons may be related to the soil classes found in the area which calls for summerfallowing more frequently than in other areas in the region, and to the acreage devoted to forage crops in this livestock area.

TABLE 27. CANADIAN WHEAT BOARD SPECIFIED ACREAGE FOR DELIVERY POINTS, BY DELIVERY POINT, 1962-63 TO 1969-70

Delivery Point	1962-63 ¹	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	Percent of Change 1962-63 to 1969-70
<i>Too Small to Classify</i>									
Rofford	7,950	8,914	8,870	8,661	9,142	7,765	closed	—	+ 11.9
Colby	25,041	24,671	24,778	26,453	27,572	29,309	29,070	28,026	- 5.3
Rufford	17,076	16,371	14,932	15,391	16,648	16,501	16,109	16,163	- 40.2
Howden	13,280	13,823	12,957	9,378	6,893	6,995	7,378	7,945	+ 30.7
Springhill	14,569	15,852	18,335	19,657	21,973	21,044	19,967	19,035	+ 8.7
Fairview	21,288	21,313	21,301	21,059	22,841	23,140	23,038	23,134	+ 56.7
Golden Stream	10,912	10,131	8,497	7,259	9,297	12,890	14,970	17,098	- 12.2
Tenby	14,158	13,266	13,633	14,596	12,683	11,787	13,054	12,424	- 2.6
<i>Hamlets</i>									
Cordova	11,669	12,778	12,198	12,483	12,415	11,932	12,183	11,361	+ 11.0
Gregg	18,845	19,036	21,580	19,764	20,443	20,240	20,587	20,917	+ 7.6
Mentmore	17,261	17,893	17,094	15,991	16,760	17,517	18,208	18,570	+ 8.7
Oberon	12,306	11,805	12,078	12,140	12,741	13,796	13,741	13,378	+ 28.5
Moorepark	14,835	15,048	14,145	14,878	15,350	17,796	19,519	19,062	+ 37.6
Beaver	13,375	12,328	14,452	14,122	15,860	14,721	14,953	14,613	+ 14.6
Firdale	14,903	15,274	14,929	14,539	14,919	14,613	14,822	17,073	- 25.5
Katrime	36,412	34,584	34,951	32,782	32,624	29,813	28,303	27,136	- 8.7
Ingelow	6,572	6,650	7,065	10,005	9,959	10,813	10,508	11,357	+ 72.8
Edwin	19,797	20,226	20,952	17,789	19,166	19,248	19,327	18,131	+ 3.5
Justice-Douglas	48,037	46,284	46,757	50,102	42,872	47,909	49,233	49,736	+ 5.3
Helston	29,680	32,702	34,231	33,425	36,220	36,328	36,050	35,377	+ 19.2
Bethany	9,412	9,710	9,236	9,201	7,505	8,203	8,236	9,911	- 17.9
Franklin	27,332	27,673	27,612	26,932	24,659	24,446	23,775	22,436	- 11.5
Birnie	24,574	25,049	22,980	22,893	23,838	23,668	23,988	21,759	+ 0.2
Forrest	38,601	38,931	34,928	34,962	33,834	36,021	36,362	38,680	+ 296.1
Macdonald	9,113	10,573	11,552	23,991	26,028	30,145	30,309	36,094	- 7.3
Wellwood	18,187	17,739	17,445	18,173	17,539	17,795	18,133	16,861	-

TABLE 27. CANADIAN WHEAT BOARD SPECIFIED ACREAGE FOR DELIVERY POINTS, BY DELIVERY POINT, 1962-63 TO 1969-70 (concluded)

Delivery Point	1962-63 ¹	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	Percent of Change 1962-63 to 1969-70
<i>Villages</i>									
Riding Mountain	14,258	13,411	13,286	15,999	18,832	18,871	22,376	+ 56.9	
Rosendale	18,874	19,055	17,515	18,342	17,961	16,423	15,895	- 17.7	
Clanwilliam	46,300	47,052	48,344	48,937	46,186	46,461	47,156	+ 0.4	
Basswood	29,069	29,334	29,720	29,311	30,702	31,413	31,778	+ 12.6	
Sidney	25,215	23,421	23,188	21,822	22,814	22,384	21,406	- 18.8	
Eden	43,125	45,554	45,279	46,661	46,613	46,163	45,303	+ 11.4	
Brookdale	42,219	43,774	44,175	41,356	40,113	42,312	42,245	- 9.6	
Westbourne	18,173	28,303	22,801	22,031	22,321	24,604	24,999	- 4.4	
Arden	44,145	43,580	42,870	42,303	41,904	45,673	47,587	- 2.8	
Glenella	53,849	54,723	51,488	50,173	49,362	52,243	53,784	+ 2.7	
Kelwood	45,018	44,862	43,007	45,955	42,099	42,412	42,591	- 7.7	
Plumas	39,984	43,000	41,804	40,553	39,677	44,103	41,917	+ 3.8	
<i>Towns</i>									
Austin	42,616	44,801	42,614	43,348	41,948	44,213	47,303	- 13.1	
Rapid City	37,042	35,986	34,637	34,782	33,574	36,505	37,396	- 12.6	
McCreary	58,901	58,865	58,966	59,275	55,052	63,050	67,865	+ 19.0	
<i>Greater Towns</i>									
Erickson	40,992	41,649	42,618	43,149	43,466	48,962	52,962	53,677	+ 30.9
Treherne	56,052	54,568	54,101	54,420	56,199	60,714	60,509	63,556	+ 13.4
MacGregor	52,431	52,547	51,471	50,713	48,979	49,903	50,049	47,393	- 9.6
Carberry	28,255	27,461	26,004	26,081	25,619	26,594	25,977	26,862	- 4.9
Gladstone	84,336	83,160	82,193	78,186	78,955	82,343	88,024	92,475	+ 9.6
Minnedosa	46,271	44,193	46,138	45,071	52,861	55,939	62,304	62,640	+ 35.4
Neepawa	47,117	48,580	48,749	49,628	48,379	48,901	49,988	53,210	+ 12.9
<i>Cities</i>									
Brandon	151,482	156,892	163,433	161,175	161,558	165,044	178,890	200,759	+ 32.5
Study Area Total	1,560,909	1,583,395	1,571,985	1,573,184	1,572,122	1,639,626	1,676,622	1,692,654	+ 8.4

TABLE 28. PERCENT OF SPECIFIED ACRES DEVOTED TO CANADIAN WHEAT BOARD GRAINS¹, 1963-64 TO 1969-70

Delivery Point	Board Grains 1963-64		Board Grains 1964-65		Board Grains 1965-66		Board Grains 1966-67		Board Grains 1967-68		Board Grains 1968-69		Board Grains 1969-70	
	Acres	Per- cent												
<i>Too Small to Classify</i>														
Rufford	4,721	53.0	4,661	52.5	4,749	54.8	5,354	58.6	4,262	54.9	Closed			
Colby	13,226	53.6	13,231	53.4	14,178	53.6	14,833	53.8	16,120	55.0	16,805	57.8	14,918	53.2
Rignold	8,282	50.6	8,759	58.7	8,827	57.4	9,465	56.9	10,157	61.6	9,902	61.5	8,450	52.3
Howden	7,362	53.3	7,193	55.5	5,232	55.8	3,821	55.4	4,215	60.3	4,217	57.2	4,073	51.3
Springhill	8,880	56.0	9,969	54.4	11,647	59.3	13,025	59.3	13,352	63.4	12,928	64.7	11,374	59.8
Fairview	10,670	50.1	10,521	49.4	10,404	49.4	11,787	51.6	11,515	49.8	11,702	50.8	10,404	45.0
Golden Stream	5,277	52.1	4,588	54.0	3,599	49.6	4,988	53.7	7,316	56.8	8,700	58.1	9,452	55.3
Tenby	7,183	54.1	7,230	53.0	7,647	52.4	6,910	54.5	6,505	55.2	7,620	58.4	6,356	51.2
<i>Hamlets</i>														
Cordova	6,633	51.9	6,831	56.0	7,009	56.1	7,226	58.2	7,120	59.7	7,457	61.2	6,187	54.5
Gregg	10,033	52.7	11,168	51.8	10,417	52.7	10,777	52.7	10,818	53.4	11,556	56.1	10,844	51.8
Mentmore	9,734	54.4	9,764	57.1	9,354	58.5	9,910	59.1	10,233	58.4	10,795	59.3	10,890	58.6
Oberon	6,451	54.6	6,602	54.7	7,272	59.9	7,743	60.8	8,857	64.2	8,907	64.8	7,391	55.2
Moorepark	8,304	55.2	8,441	59.7	8,932	60.0	10,214	66.5	11,356	63.8	11,710	60.0	10,907	57.2
Beaver	6,796	55.1	9,092	62.9	9,309	65.9	10,333	65.2	9,274	63.0	10,239	68.5	11,855	64.4
Firdale	7,923	51.9	7,399	49.6	7,095	48.8	7,503	50.3	6,884	47.1	7,496	50.6	8,314	48.7
Katrim	16,220	46.9	17,305	49.5	16,502	50.3	17,172	52.6	16,080	53.9	16,607	58.7	15,246	56.2
Ingelow	3,129	47.1	3,345	47.3	6,191	61.9	5,621	56.4	5,263	48.7	5,444	51.8	5,899	51.9
Edwin	10,215	50.5	11,415	54.5	8,673	48.8	10,432	54.4	10,274	53.4	10,235	53.0	9,433	52.0
Justice-Douglas	22,602	48.8	22,398	47.9	22,677	45.3	22,434	52.3	24,347	50.8	25,962	52.7	22,581	45.4
Helston	13,902	42.5	16,280	47.6	15,981	47.8	16,437	45.4	16,794	46.2	18,334	50.9	16,156	45.7
Bethany	4,897	50.4	4,636	50.2	4,853	52.7	4,199	55.9	3,960	48.3	4,284	52.0	5,147	51.9
Franklin	15,156	54.8	15,445	55.9	15,459	57.4	15,159	61.5	15,240	62.3	14,915	62.7	12,728	56.7
Birnie	12,789	51.1	12,505	54.4	12,052	52.6	12,206	51.2	12,334	52.1	12,964	54.0	11,856	54.5
Forrest	21,473	55.2	19,230	55.1	20,088	57.5	20,009	59.1	22,450	62.3	22,313	61.4	20,395	52.7
Macdonald	5,525	52.3	7,442	64.4	15,086	62.9	16,931	65.0	21,177	70.3	21,315	70.3	20,330	56.3
Wellwood	9,090	51.2	8,585	49.2	8,965	49.3	8,925	50.9	9,288	52.2	8,896	49.1	7,634	45.3

TABLE 28. PERCENT OF SPECIFIED ACRES DEVOTED TO CANADIAN WHEAT BOARD GRAINS¹, 1963-64 TO 1969-70 (concluded)

Delivery Point	Board Grains 1963-64		Board Grains 1964-65		Board Grains 1965-66		Board Grains 1966-67		Board Grains 1967-68		Board Grains 1968-69		Board Grains 1969-70	
	Acres	Per- cent												
<i>Villages</i>														
Riding Mountain	7,364	54.9	8,590	64.2	8,376	63.0	10,394	65.0	11,589	61.5	11,476	60.8	12,420	55.5
Rossendale	9,622	50.5	8,657	49.4	8,164	44.5	9,013	50.2	8,839	53.8	9,581	60.3	8,540	55.0
Clanwilliam	26,603	56.5	27,553	57.0	29,169	59.6	26,396	57.2	26,194	56.4	27,656	58.6	25,484	54.8
Basswood	14,672	50.0	15,351	51.7	15,532	53.0	16,937	55.2	17,545	55.9	17,922	56.4	17,180	52.5
Sidney	10,906	46.6	9,484	40.9	9,835	45.1	10,485	46.0	10,240	45.7	10,159	47.5	9,033	44.1
Eden	24,959	54.8	24,205	53.5	25,694	55.1	25,106	53.9	25,833	56.0	25,556	56.4	24,853	51.7
Brookdale	24,152	55.2	25,043	56.7	24,064	58.2	25,066	62.5	27,212	64.3	27,579	65.3	21,943	57.5
Westbourne	13,801	48.8	13,797	60.5	13,313	60.4	12,549	56.2	14,820	60.2	15,973	63.9	9,122	52.5
Arden	21,197	48.6	23,016	53.7	22,614	53.5	22,738	54.3	25,181	55.1	26,574	55.8	22,901	53.4
Glenella	26,117	47.7	26,869	52.2	26,257	52.3	25,960	52.6	28,907	55.3	30,082	55.9	30,211	54.6
Kelwood	21,397	47.7	22,988	53.5	23,869	51.9	21,977	52.2	23,895	56.3	23,258	54.6	21,577	51.9
Plumas	21,234	49.4	21,750	52.0	20,743	51.2	19,169	50.1	23,155	52.5	23,886	57.0	21,857	52.6
<i>Towns</i>														
Austin	22,198	49.5	20,792	48.8	21,338	49.2	23,286	55.5	25,089	56.7	27,826	58.8	19,873	53.9
Rapid City	18,999	52.8	18,929	54.6	19,453	55.9	18,919	56.4	21,079	57.7	21,965	58.7	16,401	50.6
McCreary	27,763	47.2	29,705	50.4	29,860	50.4	26,711	48.5	31,641	50.2	35,794	52.7	35,413	50.5
<i>Greater Towns</i>														
Erickson	20,404	49.0	20,853	48.9	21,686	50.3	21,574	49.6	24,604	50.3	26,712	50.4	26,402	49.2
Treherne	28,058	51.4	26,974	49.9	28,044	51.5	29,998	53.4	34,624	57.0	35,950	59.4	34,295	54.0
MacGregor	25,745	49.0	24,745	48.1	24,567	48.4	25,184	51.4	25,994	52.1	27,850	55.6	27,814	58.7
Carberry	11,588	42.2	10,457	40.2	11,147	42.7	11,065	43.2	12,337	46.4	11,270	43.4	11,559	43.0
Gladstone	41,113	49.5	43,313	52.7	41,249	52.8	41,591	52.7	43,938	53.4	49,099	55.8	46,325	50.1
Minnedosa	22,938	51.9	23,824	51.6	23,222	51.5	29,771	56.3	32,238	57.6	35,460	56.9	31,751	50.7
Neepawa	24,709	50.9	24,079	49.4	25,465	51.3	25,485	52.7	25,863	52.9	26,992	54.0	26,674	50.1
<i>Cities</i>														
Brandon	79,708	50.8	84,938	52.0	89,539	55.6	94,224	58.3	98,171	59.5	104,225	58.3	111,401	55.5
Study Area Total	801,740	50.6	819,947	52.2	835,398	53.1	857,716	54.6	914,179	55.8	954,148	56.9	891,949	52.7

Major Grains: Quota Acres

Tables 29 and 30 are supplementary to Table 27. They comprise data based on the limited experience we have of the farmers assigning acreage to the grain of their choice for delivery quota purposes.

Crop year 1970-71 was the year of the wheat acreage reduction program. Under it the producers were not permitted to use as part of their quota base any of their acreage seeded that year to wheat. In order to have a wheat quota the regulations called for them to assign from a bank of land whatever quota acreage base they needed and could afford. The bank included one-quarter of the previous crop years summerfallow and new breaking, together with all of their 1970 summerfallow and the change in acreage of their forage crop land (1970 over 1969), plus their land seeded to certain root crops.

Thus the greater their summerfallow in 1970 the greater was their assignable quota acres. The assignment was not limited to wheat. Farmers were permitted to assign any part of these acres to any crop in order to increase their delivery base. They chose wheat more than the other grains, no doubt in an attempt to reduce their farm inventory of this higher-priced grain.

Quota acres as a percent of seeded acres can be taken as indicating the relative extent of a build-up of stocks on farms. In the study area this value was 326 per cent, somewhat above the Province of Manitoba as a whole (314 per cent). Howden stands out significantly as they increased their delivery base to 5,058 acres from a seeded acreage of only 756 acres. Gladstone was another point where a wheat surplus seems to have accumulated and in an attempt to reduce stocks the producers delivering to that point blew their quota acres up to 31,021 acres although they had seeded only 5,756.

With a few exceptions very little of the bank of assignable acres was used to increase the delivery base for oats in the study area. The increase (30 per cent) was close to that for the whole province (26 per cent). Exceptions were Tenby, Helston, Arden, Glenella, Plumas and Gladstone. At each of these points it appears that producers had a carry over of oats that they could not use up on their farms and chose to deliver to the Wheat Board for cash.

A very similar situation held for barley. Again the quota acres as a per cent of seeded acres was much like that for Manitoba as a whole (129 per cent versus 126 per cent). The exceptions here were Helston (210

TABLE 29. MAJOR GRAINS: QUOTA ACRES AS A PERCENT OF SEEDED ACRES, BY DELIVERY POINT, 1970-71

Delivery Point	Seeded Acres	Wheat		Oats		Barley		Flaxseed	
		Quota Acres	Quota Seeded X 100	Seeded Acres	Quota Acres	Quota Seeded X 100	Seeded Acres	Quota Acres	Quota Seeded X 100
<i>Too Small to Classify</i>									
Rufford	Closed	4,201	13,824	329	3,826	4,299	112	2,402	117
Colby		1,968	7,819	397	1,054	1,254	119	3,624	114
Rignold			5,058	669	707	1,036	147	763	111
Howden		756						844	109
Springhill		3,791	8,935	236	1,807	1,865	103	2,703	2,935
Fairview		3,787	13,380	353	1,467	1,506	103	2,180	2,364
Golden Stream		1,822	5,717	313	2,685	3,413	127	1,770	1,952
Tenby		1,727	5,050	292	2,333	3,735	160	853	132
<i>Hamlets</i>									
Cordova	Closed	3,249	9,217	284	2,278	2,345	103	2,191	100
Gregg		3,254	9,118	280	1,688	1,688	100	4,214	105
Mentmore		1,753	6,287	359	1,534	1,534	100	4,430	100
Oberon								1,019	100
Moorepark		3,919	12,700	324	2,436	2,436	100	2,923	105
Beaver		2,754	9,517	346	2,471	2,683	109	4,462	103
Firdale		1,938	5,128	265	3,262	4,431	136	1,136	1,572
Katrine		2,015	9,898	491	3,835	5,398	141	3,967	129
Ingleow		1,551	3,788	244	995	1,265	127	993	127
Edwin		1,741	7,035	404	3,027	3,690	122	2,286	143
Justice-Douglas		5,714	19,669	344	4,476	4,570	102	6,412	114
Heiston		2,960	9,511	321	5,307	8,760	165	2,272	210
Bethany		1,285	3,887	302	768	1,023	133	877	962
Franklin		3,287	13,436	346	977	1,116	114	4,186	112
Birnie		2,872	8,606	300	3,365	4,028	120	1,642	149
Forrest		5,759	20,420	355	1,958	2,143	109	6,506	7,616
Macdonald		6,143	15,988	260	1,039	1,039	100	10,343	11,720
Wellwood		2,462	5,997	244	1,926	2,120	110	1,666	1,861
<i>Villages</i>									
Riding Mountain		4,363	10,484	240	3,583	4,215	118	1,671	1854
Rossendale		1,752	6,444	369	2,574	3,362	131	918	111
Clanwilliam		5,652	21,681	384	4,563	5,686	125	5,871	222
Basswood		5,739	17,584	306	1,699	1,822	107	5,545	140
Sidney		2,403	6,127	255	3,199	3,555	111	2,454	116
Eden		6,949	28,192	406	5,281	6,682	127	3,017	124
Brookdale		6,077	17,338	285	3,249	3,696	114	7,142	114
Westbourne		1,635	7,056	432	774	924	119	5,583	133
Arden		4,522	15,893	351	7,193	10,887	151	3,413	148
Glenella		7,194	18,793	261	11,749	17,686	151	3,707	155
Kelwood		5,936	17,334	292	6,607	9,583	145	2,007	138
Plumas		4,785	14,798	309	5,537	9,221	166	4,176	148

TABLE 29. MAJOR GRAINS: QUOTA ACRES AS A PERCENT OF SEEDED ACRES, BY DELIVERY POINT, 1970-71 (concluded)

Delivery Point	Wheat			Oats			Barley			Flaxseed		
	Seeded Acres	Quota Acres	Quota Seeded X 100	Seeded Acres	Quota Acres	Quota Seeded X 100	Seeded Acres	Quota Acres	Quota Seeded X 100	Seeded Acres	Quota Acres	Quota Seeded X 100
Towns												
Austin	4,229	12,517	296	7,470	9,096	122	5,483	6,904	126	1,934	2,705	140
Rapid City	5,478	19,305	352	2,541	2,601	102	3,471	4,161	120	3,035	3,301	109
McCreary	6,848	22,582	330	13,202	19,100	145	5,499	7,692	140	3,178	4,002	126
Greater Towns												
Erickson	5,109	18,844	369	5,827	7,471	145	9,026	17,870	198	462	477	103
Tréherne	8,645	27,377	317	7,639	7,791	128	5,779	5,917	102	5,601	5,749	103
MacGregor	3,910	15,248	390	6,945	8,617	124	6,780	8,154	120	3,763	4,935	131
Carberry	3,061	9,955	325	4,883	5,959	122	2,349	2,819	120	1,171	1,373	117
Gladstone	5,756	31,021	539	12,345	21,175	172	10,928	18,690	171	7,310	9,377	128
Minnedosa	10,537	37,041	352	4,054	4,603	114	8,359	11,600	139	3,595	4,087	114
Neepawa	7,176	23,979	334	8,309	10,341	124	5,436	6,683	123	1,567	1,567	100
Cities												
Brandon	25,962	71,131	274	26,167	31,898	122	32,532	39,667	122	7,092	7,651	108
Study area Total	215,017	700,709	326	210,611	273,353	130	210,396	272,148	129	103,345	119,763	116
Prov. of Manitoba	1,573,254	4,944,532	314	1,358,157	1,719,722	127	1,549,707	1,956,043	126	1,120,973	1,283,001	114

Source: Canadian Wheat Board.

per cent), Rossendale (222 per cent), Glenella (155 per cent), Erickson (198 per cent) and Gladstone (171 per cent). Farmers in some points assigned virtually no acreage at all to barley, for one reason or another, including perhaps a lack of knowledge of the regulations. Among the points where quota acres were the same as seeded acres were: Gregg, Oberon, Beaver, and Treherne.

Farmers were given prior knowledge of what the final quota would be. In the case of wheat this was announced as 8 bushels per quota acre.

Major Grains: Quota Acres

The regulations governing the assignable acres changed for crop year 1971-72 (Table 30). All land seeded to wheat was permitted to be included in quota acres. The bank now comprised acreage seeded to all wheat, durum, oats, barley, rye, flaxseed, rapeseed and some miscellaneous crops, plus summerfallow. This bank was supplemented by adding the lesser of one-third of the total of the acres just detailed or land in perennial forage.

From this bank of assignable acres the individual farmer could allocate acreage for delivery quota purposes to a long selection of grains. Other detail regulations were in force but they are not considered to be of sufficient significance to warrant the long explanation required.

In the Brandon-Neepawa study area, producers built their quota acres for wheat up to 271 per cent of their seeded acres. This compares with 251 per cent in the whole province. Oats was decreased to 89 per cent, versus 75 per cent in Manitoba, as farmers used oats acreage to bolster wheat, barley and flaxseed quota bases. Evidently oats can be disposed of other than through the Canadian Wheat Board more easily than can wheat and barley. Its lower value is also a factor. Barley quota acres were boosted by 26 per cent (17 per cent for the province) and flaxseed by 33 per cent (19 per cent for the province).

Again producers were told just before seeding time what they might expect to deliver during the crop year, viz: 388 million bushels of wheat, 45 of oats and 230 of barley. This translated to about 8 bushels per quota acre for wheat, 7 for oats and 12 for barley. Thus, for wheat if a yield of 20 to 25 bushels per acre were expected and only 8 could be delivered, obviously another 10 or so would have to be made up from assigned acres. Such was the case.

TABLE 30. MAJOR GRAINS: QUOTA ACRES AS A PERCENT OF SEEDED ACRES, BY DELIVERY, 1971-72

Delivery Point	Wheat			Oats			Barley			Flaxseed		
	Seeded Acres	Quota Acres	Quota Seeded X 100	Seeded Acres	Quota Acres	Quota Seeded X 100	Seeded Acres	Quota Acres	Quota Seeded X 100	Seeded Acres	Quota Acres	Quota Seeded X 100
<i>Too Small to Classify</i>												
Rufford	Closed	5,964	18,917	317	4,530	2,137	47	3,418	4,309	126	1,072	853
Colby		2,884	8,406	291	1,316	936	71	4,243	5,299	125	1,246	1,343
Rignold	Closed											80
Howden												108
Springhill		5,394	11,646	216	1,775	773	43	3,900	4,736	121	100	125
Fairview		4,487	12,404	276	1,990	2,118	106	3,879	4,977	128	180	100
Golden Stream		2,563	6,780	265	2,802	2,137	76	1,783	3,053	171	2,203	3,303
Tenby		3,185	7,205	226	2,513	2,232	89	1,457	2,345	161	623	636
Hamilts												102
Cordova	Closed											
Gregg		4,128	13,996	339	2,836	2,514	89	2,778	2,434	88	185	210
Mentmore		4,676	11,918	255	1,782	1,169	67	5,637	6,393	113	217	328
Oberon		2,818	7,619	270	1,831	2,022	110	1,478	1,986	134	141	170
Moorepark		6,976	19,381	278	2,370	673	28	4,613	3,230	70	1,096	1,230
Beaver		5,846	14,652	251	2,251	1,791	80	5,622	4,883	87	879	1,186
Firdale		2,298	6,425	280	3,308	3,475	105	1,571	2,466	157	481	803
Katrim		3,406	10,889	320	4,097	3,935	96	4,488	6,029	134	2,314	3,450
Ingleow		1,321	3,657	277	681	749	110	1,001	1,497	150	98	91
Edwin		3,368	10,677	317	2,839	2,584	91	2,784	3,552	128	1,144	1,397
Justice-Douglas		7,782	22,880	294	4,082	2,522	62	9,384	11,174	119	963	1,269
Helston		4,521	13,615	301	6,312	6,245	99	3,716	5,409	146	968	1,264
Bethany	Closed											
Franklin		6,289	15,729	250	799	322	40	4,573	3,911	86	828	909
Birnie		4,201	11,864	282	3,298	2,634	80	1,963	2,355	120	389	630
Forrest		8,346	22,850	274	2,329	1,480	64	9,069	9,631	106	1,506	1,725
Macdonald		7,946	16,960	213	1,636	690	42	10,785	11,746	109	2,456	2,249
Wellwood		3,072	9,576	312	2,417	1,240	51	1,989	3,283	165	159	189
Villages												
Riding Mountain		6,053	15,318	253	3,404	3,354	99	3,720	3,347	90	199	360
Rossendale		4,818	12,097	251	3,527	4,811	136	2,037	3,449	169	1,318	1,704
Clanwilliam		8,975	24,260	270	4,630	4,320	93	7,549	11,858	157	348	587
Basswood		7,320	21,026	287	1,935	578	30	7,178	9,565	133	892	1,462
Sidney		2,475	11,067	447	2,783	2,073	74	2,512	3,351	133	81	98
Eden		15,305	38,277	250	6,478	4,580	71	5,203	4,558	88	817	805
Brookdale		8,588	22,683	264	3,551	2,143	60	9,375	11,006	117	720	820
Westbourne		3,215	8,527	265	1,388	1,221	88	7,870	9,309	118	786	1,050
Arden		8,238	23,465	285	8,323	9,585	115	5,807	7,196	124	1,335	1,429
Glenella		11,962	30,653	256	12,585	14,745	117	6,926	8,497	123	2,333	2,998
Kelwood		9,543	27,316	286	6,982	4,383	63	3,015	3,317	110	698	836
Plumas		7,137	17,169		7,039	10,175	145	4,657	7,397	159	2,862	4,233

TABLE 30. MAJOR GRAINS: QUOTA ACRES AS A PERCENT OF SEEDED ACRES, BY DELIVERY POINT, 1970-71 (concluded)

	Wheat			Oats			Barley			Flaxseed		
	Seeded Acres	Quota Acres	<u>Quota Seeded</u> X 100	Seeded Acres	Quota Acres	<u>Quota Seeded</u> X 100	Seeded Acres	Quota Acres	<u>Quota Seeded</u> X 100	Seeded Acres	Quota Acres	<u>Quota Seeded</u> X 100
<i>Towns</i>												
Austin	6,932	20,631	298	8,636	5,884	68	7,415	8,571	116	1,502	3,035	202
Rapid City	9,084	22,718	250	2,737	1,364	50	6,147	7,455	121	754	1,247	165
McCreary	10,848	35,268	325	15,036	13,740	91	7,889	10,748	136	1,661	3,192	192
<i>Greater Towns</i>												
Erickson	7,118	20,100	282	4,764	4,938	104	11,488	20,908	182	171	319	187
Treherne	14,470	42,470	294	9,224	4,261	46	8,591	7,800	91	1,652	1,712	104
MacGregor	7,310	20,440	280	7,431	7,438	100	9,134	11,687	128	1,532	1,986	130
Carberry	3,861	12,829	332	3,934	3,935	130	3,341	4,682	140	208	433	208
Gladstone	13,418	37,802	282	15,553	20,148	130	15,782	21,282	135	5,491	7,260	132
Minnedosa	16,956	42,063	248	4,353	1,934	44	12,464	15,555	125	725	1,370	189
Neepawa	12,760	33,082	259	8,605	7,928	92	7,916	9,347	118	857	1,007	118
<i>Cities</i>												
Brandon	37,017	91,418	247	30,068	27,421	91	40,923	54,882	134	2,172	2,740	126
Study Area Total	334,874	908,725	271	229,860	205,337	89	287,070	360,465	126	48,362	64,223	133
Prov. of Manitoba	2,677,550	6,722,922	251	1,555,093	1,159,313	75	2,169,912	2,533,642	117	576,416	687,844	119

Source: Canadian Wheat Board.

Quotas Required to Fill Elevator Storage Capacity

The ratio of country elevator capacity to specified acreage represents the theoretical number of quotas (bushels per specified acre) required to completely fill an empty delivery point. This, then, serves as a measure of the investment efficiency at a point. A high ratio indicates over investment in storage and handling capacity relative to the volume of grain that can be expected to move through the point. Table 31 lists specified acres, elevator capacity and their ratio for the points in the study area.

Once again these data are obsolete due to the discarding of the specified acreage concept for delivery purposes. They are retained in this report to try to show which points have more plant than is necessary. It could be inferred that Rignold, Howden, Beaver, Katrime, Franklin, Wellwood, Clanwilliam, Treherne and Minnedosa in particular are in this category. Howden was closed as a grain delivery point on August 1, 1971. The situation would be further improved by the closing down of certain other points. Minnedosa, Franklin and Treherne would have a reduced ratio (i.e. greater efficiency) if Clanwilliam were to be closed, for instance.

Also included in Table 31 is a column which shows the calculated number of boxcars required at each point to carry away a one-bushel quota. The required number varies directly with the specified acreage and so increases with the size of the community, because the larger communities tend to have the larger grain producing hinterlands. For the points which we have labelled "too small to classify", the average number of cars is 9. For Brandon, 101 cars are needed to move a one-bushel quota. For the greater towns, 29 or 30 cars are called for. Points with a low number of cars per quota such as Tenby, Oberon, Ingelow, Bethany, Rossendale and Westbourne can afford to wait much longer for cars to be spotted than at points such as Brandon, Neepawa, Minnedosa, Gladstone, Treherne, Erickson, McCreary and Glenella.

Number of Boxcars per Shunt that can be Loaded

The number of boxcars that an elevator operator can load in one group is limited by the length of the rail siding and the location of the elevator on the siding. While it may be possible to store twenty boxcars on the siding, perhaps only four or five can be loaded ready for collection by a train at one call. The number of car lengths between the elevator spout and the neighbouring company's spout at the ends of the siding is crucial.

TABLE 31. RATIO OF RATED ELEVATOR CAPACITY TO SPECIFIED ACREAGE¹ AND NUMBER OF BOX-CARS NEEDED TO MOVE A ONE-BUSHEL QUOTA BY DELIVERY POINT, 1969-70

Delivery Point	Specified Acres As of November 29, 1969	Rated Elevator Capacity	Ratio of Capacity To Specified Acres	Number of Box-Cars ² To Move a One Bushel Quota
<i>Too Small to Classify</i>				
Rufford	Closed			
Colby	28,026	60,000	2.1	14
Rignold	16,163	82,000	5.1	8
Howden	7,945	57,000	7.2	4
Springhill	19,035	36,200	1.9	10
Fairview	23,134	93,000	4.0	12
Golden Stream	17,098	34,400	2.0	9
Tenby	12,424	67,000	5.4	7
<i>Hamlets</i>				
Cordova	11,361	49,000	4.3	6
Gregg	20,917	90,000	4.3	11
Mentmore	18,570	88,700	4.8	10
Oberon	13,378	66,000	4.9	7
Moorepark	19,062	79,300	4.2	10
Beaver	18,412	105,000	5.7	10
Firdale	17,073	62,000	3.6	9
Katrine	27,136	173,800	6.4	14
Ingelow	11,357	52,000	4.6	6
Edwin	18,131	56,200	3.1	9
Justice-Douglas	49,736	202,900	4.1	25
Helston	35,377	102,600	2.9	18
Bethany	9,911	46,500	4.7	5
Franklin	22,436	171,200	7.6	12
Birnie	21,759	31,300	1.4	11
Forrest	38,680	136,600	3.5	20
Macdonald	36,094	67,400	1.9	18
Wellwood	16,861	115,000	6.8	9
<i>Villages</i>				
Riding Mountain	22,376	50,000	2.2	12
Rossendale	15,538	77,000	5.0	8
Clanwilliam	46,501	237,100	5.1	24
Basswood	32,739	100,400	3.1	17
Sidney	20,465	36,700	1.8	11
Eden	48,028	172,200	3.6	24
Brookdale	38,151	178,300	4.7	19
Westbourne	17,371	78,000	4.5	9
Arden	42,915	92,300	2.2	22
Glenella	55,327	97,700	1.8	28
Kelwood	41,538	121,300	2.9	21
Plumas	41,523	144,000	3.5	21

TABLE 31. RATIO OF RATED ELEVATOR CAPACITY TO SPECIFIED ACREAGE¹ AND NUMBER OF BOX-CARS NEEDED TO MOVE A ONE-BUSHEL QUOTA BY DELIVERY POINT, 1969-70 (concluded)

Delivery Point	Specified Acres As of November 29, 1969	Rated Elevator Capacity	Ratio of Capacity To Specified Acres	Number of Box-Cars ² To Move a One Bushel Quota
<i>Towns</i>				
Austin	37,043	88,200	2.4	19
Rapid City	32,394	126,600	3.9	17
McCreary	70,097	151,300	2.2	35
<i>Greater Towns</i>				
Erickson	53,677	228,300	4.3	27
Treherne	63,556	331,600	5.2	32
MacGregor	47,393	155,000	3.3	24
Carberry	26,862	56,000	2.1	14
Gladstone	92,475	387,600	4.2	47
Minnedosa	62,640	367,300	5.9	32
Neepawa	53,210	208,000	3.9	27
<i>Cities</i>				
Brandon	200,759	717,800	3.6	101

¹Translate to bushels per Quota

²Assume 2,000 bushels per Box-Car.

Data for each delivery point in the study region for each company at the point and each elevator are given in Table 32. Generally, as the size of community increases, there are more elevators, and therefore a greater number of boxcars per delivery point. On the average there are 6 cars in the too small to classify communities, 9 cars in the hamlets, 12 cars in the villages, towns and greater towns and 32 cars in the city of Brandon. The range extends from 4 at Tenby and Ingelow to 32 at Brandon.

Also included in Table 32 is information on the loading blocks and the subdivisions.

A comparison between Table 32 and Table 31 shows that only at 7 delivery points (Howden, Golden Stream, Mentmore, Moorepark, Bethany, Wellwood, Clanwilliam and Brookdale) can one shunt of cars move a quota.

Farm Trucks

Table 33 presents estimates of the number and size distribution of farm trucks registered in the Brandon-Neepawa region. The average number of trucks per census farm in 1966 in census divisions 7 and 10 was applied to the total number of permit holders in the study area in 1966-67. The number of trucks per farm worked out to be less than one and the number of permit holders in 1966-67 was 4,685 resulting in an estimated 4,500 trucks in the study area. Percentage estimates of distribution by size, obtained from the Canadian Transport Commission, were then applied to the total number of trucks to arrive at the number of trucks within each size group.

More than half the trucks are of the one ton variety. The next high number of trucks were 2 ton models.

Farm to Elevator Hauling Distances

The farm land from which grain delivery points draw grain from producers were plotted for the crop year 1962-63 as shown in Figure 1. Each quarter section, as reported in Canadian Wheat Board permit books, was plotted on a map producing a graphic portrayal of the relative sizes and shapes of grain hinterlands. The farm to elevator hauling distance was measured from the corner of the farm nearest to a good road leading to the elevator. The route chosen involved two criteria, first, shortest distance and second, best available road.

TABLE 32. MAXIMUM NUMBER OF BOX-CARS PER SHUNT THAT CAN BE LOADED AT SPECIFIED COUNTRY ELEVATORS IN THE STUDY AREA,
JULY 1971

Delivery Point	Canadian Wheat Board Loading Block	Subdivision	Number of Cars Per Point	Elevator Company	Number of Cars Per Company
Delivery Point	Number	Name	Railway		
<i>Too Small to Classify</i>					
Rufford	Closed	Winnipeg West	C.N.	Gladstone	5
Colby	5	Winnipeg West	C.N.	Gladstone	6
Rignold	5	Brandon North	C.N.	Neepawa	5
Howden	7	Brandon North	C.N.	Rossburn	5
Springhill	7	Brandon North	C.N.	Carberry C.N.	5
Farview	7	Brandon North	C.N.	Gladstone	6
Golden Stream	5	Winnipeg West	C.N.	Federal Grain Ltd.	6
Tenby	5	Winnipeg West	C.N.	Gladstone	11
<i>Hamlets</i>					
Cordova	7	Brandon North	C.N.	Rapid City	5
Gregg	5	Winnipeg West	C.N.	Harte	6
Mentmore	7	Brandon North	C.N.	Rapid City	10
Oberon	63	Carberry	C.P.	Varcoe	8
Moorepark	63	Carberry	C.P.	Varcoe	10
Beaver	5	Winnipeg West	C.N.	Gladstone	7
Firdale	5	Winnipeg West	C.N.	Harte	6
Katrim	5	Winnipeg West	C.N.	Gladstone	6
Ingleow	5	Winnipeg West	C.N.	Harte	4
Edwin	7	Brandon North	C.N.	Pleasant Point	6
Justice	5	Winnipeg West	C.N.	Harte	15
Helston	5	Winnipeg West	C.N.	Neepawa	14
Bethany	7	Brandon North	C.N.	Rossburn	5
Franklin	63	Carberry	C.P.	Minnedosa	11
Birnie	7	Brandon North	C.N.	Neepawa	5
Forrest	63	Carberry	C.P.	Minota	8
Macdonald	63	Carberry	C.P.	Minnedosa	9
Wellwood	63	Carberry	C.P.	Varcoe	15
<i>Villages</i>					
Riding Mountain	7	Brandon North	C.N.	Neepawa	7
Rosendale	7	Brandon North	C.N.	Pleasant Point	7
Clanwilliam	7	Brandon North	C.N.	Rossburn	26
Basswood	63	Carberry	C.P.	Bredenbury	15
Sidney	63	Carberry	C.P.	Carberry C.P.	6
Douglas	63	Carberry	C.P.	Carberry C.P.	8
Eden	7	Brandon North	C.N.	Neepawa	15
<i>United Grain Growers Ltd.</i>					
<i>United Grain Growers Ltd.</i>					
<i>Manitoba Pool Elevators</i>					
<i>Manitoba Pool Elevators</i>					
<i>United Grain Growers Ltd.</i>					
<i>Federal Grain Ltd.</i>					
<i>United Grain Growers Ltd.</i>					
<i>United Grain Growers Ltd.</i>					
<i>Scottish Co-op Whlse. Soc. Ltd.</i>					
<i>United Grain Growers Ltd.</i>					
<i>Inter Ocean Grain Co. Ltd.</i>					
<i>Manitoba Pool Elevators</i>					
<i>Manitoba Pool Elevators</i>					
<i>Manitoba Pool Elevators</i>					
<i>United Grain Growers Ltd.</i>					

TABLE 32. MAXIMUM NUMBER OF BOX-CARS PER SHUNT THAT CAN BE LOADED AT SPECIFIED COUNTRY ELEVATORS IN THE STUDY AREA,
JULY 1971 (concluded)

Delivery Point	Canadian Wheat Board Loading Block			Subdivision	Number of Cars Per Point	Elevator Company	Number of Cars Per Company
	Number	Name	Railway				
Brookdale	63	Carberry	C.P.	Varcoe	10	Manitoba Pool Elevators	5
Westbourne	63	Carberry	C.P.	Minnedosa	6	United Grain Growers Ltd.	5
Arden	63	Carberry	C.P.	Minnedosa	12	United Grain Growers Ltd.	6
Glenella	5	Winnipeg West	C.N.	Gladstone	6	Manitoba Pool Elevators	12
Kelwood	7	Brandon North	C.N.	Neepawa	12	Manitoba Pool Elevators	6
Plumas	5	Winnipeg West	C.N.	Gladstone	18	Manitoba Pool Elevators	6
<i>Towns</i>							
Austin	63	Carberry	C.P.	Carberry C.P.	7	Manitoba Pool Elevators	7
Rapid City	63	Carberry	C.P.	Rapid City	13	Manitoba Pool Elevators	7
McCreary	5	Winnipeg West	C.N.	Gladstone	16	National Grain 1968 Ltd.	6
<i>Greater Towns</i>							
Erickson	7	Brandon North	C.N.	Rossburn	8	Federal Grain Ltd.	4
Treherne	63	La Riviere	C.P.	Glenboro	22	Manitoba Pool Elevators	4
MacGregor	63	Carberry	C.P.	Carberry C.P.	8	N.M. Paterson & Sons Ltd.	12
Carberry	63	Carberry	C.P.	Carberry C.P.	6	United Grain Growers Ltd.	5
Gladstone	5	Winnipeg West	C.N.	Gladstone	11	Manitoba Pool Elevators	8
Minnedosa	63	Carberry	C.P.	Winnedosa	19	United Grain Growers Ltd.	6
Neepawa	7	Brandon North	C.N.	Bredenbury	19	Manitoba Pool Elevators	6
<i>Cities</i>							
Brandon	7	Brandon North	C.N.	Neepawa	9	United Grain Growers Ltd.	7
	64	Brandon	C.P.	Minnedosa	9	Manitoba Pool Elevators	4
				Cromer	32	Federal Grain Ltd.	2
				Broadview		Manitoba Pool Elevators	7
						Federal Grain Ltd.	7
						Manitoba Pool Elevators	4
						National Grain 1968 Ltd.	4
						United Grain Growers Ltd.	8

TABLE 33. ESTIMATED NUMBER OF FARM TRUCKS BY SIZE IN THE STUDY AREA, 1966-67

Size of Truck (Ton Capacity)	Estimated Number Of Trucks	Percent
1/2	198	4.4
1	2,583	57.4
1 1/2	468	10.4
2	783	17.4
2 1/2 or greater	468	10.4
TOTAL	4,500	100.0

Source: Calculated from Data obtained from the Agriculture Census of Canada, 1966 and the Canadian Transport Commission.

Table 34 shows the average mileage and the range of hauling distance for grain farmers at delivery points in the study area. From the table one can see that the larger centres not only attract more patronage for grain deliveries but also attract patronage from farther distances. The average length of haul to the small centres ranges from three to seven miles whereas to the larger centres the average haul is from five to ten miles. The average lengths of haul to the town of McCreary and the city of Brandon were the longest for the study area averaging 10.14 and 10.87 miles respectively. These two communities also have the greatest number of farms composing their hinterlands.

For the Brandon-Neepawa area as a whole, the average hauling distance in 1962-63 was approximately five and a half miles.

TABLE 34. FARM TO ELEVATOR HAULING DISTANCES, BY DELIVERY POINT, 1962-63

Delivery Point	Number of Farms	Hauling Distance			Average Mileage		
		High	Low	Range			
— miles —							
<i>Too Small to Classify</i>							
Rufford	31	6.25	.75	5.50	3.32		
Colby	86	15.80	1.00	14.80	5.81		
Rignold	50	13.50	.50	13.00	4.05		
Howden	51	15.75	.50	15.25	5.99		
Springhill	50	10.50	.75	9.75	4.00		
Fairview	56	8.50	.50	8.00	3.82		
Golden Stream	34	10.80	.50	10.30	3.07		
Tenby	59	28.75	1.25	27.50	6.24		
<i>Hamlets</i>							
Cordova	42	5.25	.50	4.75	2.62		
Gregg	52	9.00	.75	8.25	3.95		
Mentmore	44	7.65	.50	7.15	3.77		
Oberon	33	8.15	.50	7.65	3.60		
Moorepark	59	8.00	1.00	7.00	4.29		
Beaver	39	5.75	.75	5.00	3.15		
Firdale	58	7.75	.25	7.50	3.19		
Katrime	116	15.50	1.00	14.50	5.39		
Ingelow	20	5.75	.75	5.00	3.06		
Edwin	69	15.10	.50	14.60	4.73		
Justice-Douglas	107	28.50	.25	28.25	7.80		
Helston	91	10.75	1.25	9.50	5.36		
Bethany	28	6.25	.75	5.50	3.09		
Franklin	85	11.75	1.00	10.75	4.62		
Birnie	86	13.50	.75	12.75	5.41		
Forrest	116	15.00	.25	14.75	6.60		
Macdonald	21	6.50	1.00	5.50	3.61		
Wellwood	50	9.00	1.25	7.75	3.66		
<i>Villages</i>							
Riding Mountain	61	10.00	.75	9.25	4.07		
Rossendale	70	10.75	.50	10.25	3.98		
Clanwilliam	211	22.10	1.00	21.10	7.57		
Basswood	109	15.00	.50	14.50	5.67		
Sidney	76	22.00	1.50	20.50	7.06		
Eden	173	16.75	.50	16.25	6.70		
Brookdale	99	15.75	.75	15.00	5.31		
Westbourne	37	17.00	1.75	15.25	5.11		
Arden	141	12.65	1.00	11.65	6.01		
Glenella	224	24.75	.75	24.00	8.52		
Kelwood	178	13.50	.50	13.00	5.57		
Plumas	128	13.00	.75	12.25	5.30		

TABLE 34. FARM TO ELEVATOR HAULING DISTANCES, BY DELIVERY POINT, 1962-63 (concluded)

Delivery Point	Number of Farms	Hauling Distance			Average Mileage		
		High	Low	Range			
— miles —							
<i>Towns</i>							
Austin	151	18.75	1.00	17.75	6.39		
Rapid City	135	14.80	1.00	13.80	5.51		
McCreary	283	32.50	.50	32.00	10.14		
<i>Greater Towns</i>							
Erickson	201	23.75	1.50	22.25	7.99		
Treherne	205	22.50	.50	22.00	6.89		
MacGregor	179	14.75	.50	14.25	6.58		
Carberry	77	20.00	1.00	19.00	6.83		
Gladstone	249	28.20	.75	27.45	6.84		
Minnedosa	142	12.00	.50	11.50	5.73		
Neepawa	160	15.50	.50	15.00	6.01		
<i>Cities</i>							
Brandon	377	29.75	2.75	27.00	10.87		
Study Area Total	5,199	32.50	.25	32.25	6.52		

PART IV

SUGGESTED ALTERNATIVE GRAIN COLLECTION SYSTEM

Probable Diversions to Alternate Delivery Points from Delivery Points Assumed Closed

Tables 35 and 36 show the probable diversions that would occur in terms of acres and bushels if the specified points were assumed closed. Percentage distribution figures were determined on the basis of the number of permits diverted to each alternate delivery point. For example, all of the permits from Erickson were diverted, 77 percent to Basswood, 22 percent to Minnedosa and 1 percent to Franklin. Total farm acreage at Erickson in 1962-63 was 79,042 acres, thus, 60,856 acres (77 percent) went to Basswood, 17,386 acres (22 percent) went to Minnedosa and 800 acres (1 percent) went to Franklin. The number of bushels diverted was also derived by this procedure. As the year 1962-63 was used as the basis for diversion, and as receipts fluctuate from year to year, an eight year average, from 1962-63 to 1969-70 has also been calculated.

Acreage and bushel diversions in Table 36 were derived from Table 35. Table 36 lists the nineteen affected points remaining open and the amounts of acreage and grain receipts each receives from those points assumed to be closed. Unlike Table 35, the Percentage distribution values in Table 36 were computed from the acreage diversion data, not vice versa.

Through-put Ratios Based on Actual, Plus Probable Additional Bushel-age

The through-put ratio is the total number of bushels received by a delivery point in one year divided by its total bushel storage capacity. This ratio represents one measure of efficiency of the grain elevator. Table 37 shows the actual through-put ratio for thirty-eight points in the Brandon-Neepawa Study Area for the crop years 1962-63 and 1969-70, together with through-put ratios that would prevail if the first nineteen delivery points shown in Table 37 were closed.

Before diversion in 1962-63 the minimum ratio was 1.40 at Ingelow, and the maximum ratio was 7.93. In 1969-70, the minimum ratio was .88 at Wellwood and the maximum ratio was 3.81 at Kelwood.

Using the year 1962-63 as the basis for diversion, the hamlet of Ingelow would experience the greatest increase in handlings of grain. The through-put ratio would increase from 1.40 to 13.42. Diversion would

TABLE 35. DIVERSIONS (FROM - TO), ACREAGES AND BUSHELAGES CONDITIONAL ON THE CLOSING OF SPECIFIED DELIVERY POINTS, 1962-63

Delivery Point Assumed Closed to Alternate Delivery Point	Percent Distribution of Acres	Acres Diverted 1962-63	Bushels Diverted	
			1962-63	8-Year Average 1962-63 to 1969-70
From: Erickson				
To: Basswood	77.0	60,856	383,777	298,484
Minnedosa	22.0	17,386	109,650	85,281
Franklin	1.0	800	4,984	3,876
Total	100.0	79,042	498,411	387,641
From: Clanwilliam				
To: Minnedosa	57.3	41,567	319,470	256,750
Franklin	33.9	24,581	189,006	151,899
Basswood	8.8	6,345	49,063	39,431
Total	100.0	72,493	557,539	448,080
From: Bethany				
To:				
Franklin	75.4	9,550	64,869	57,690
Minnedosa	24.6	3,123	21,164	18,822
Total	100.0	12,673	86,033	76,512
From: Springhill				
To: Franklin	66.1	11,493	89,310	107,144
Neepawa	33.9	5,896	45,803	54,950
Total	100.0	17,389	135,113	162,094
From: Kelwood				
To: McCreary	58.1	37,722	312,573	187,954
Glenella	41.9	27,151	225,419	135,547
Total	100.0	64,873	537,992	323,501
From: Riding Mountain				
To: Glenella	94.9	20,762	116,536	100,316
Neepawa	4.4	960	5,403	4,651
Franklin	0.7	160	860	740
Total	100.0	21,882	122,799	105,707
From: Birnie				
To: Arden	27.8	11,040	69,013	45,510
Glenella	27.8	11,031	69,013	45,510
Tenby	24.2	9,590	60,077	39,616
Neepawa	17.3	6,884	42,947	28,321
Franklin	2.9	1,170	7,199	4,747
Total	100.0	39,715	248,249	163,704

TABLE 35. DIVERSIONS (FROM - TO), ACREAGES AND BUSHELAGES CONDITIONAL ON THE CLOSING OF SPECIFIED DELIVERY POINTS, 1962-63 (continued)

Delivery Point Assumed Closed to Alternate Delivery Point	Percent Distribution of Acres	Acres	Bushels Diverted	
		Diverted 1962-63	1962-63	8-Year Average 1962-63 to 1969-70
From: Eden				
To: Neepawa	53.8	31,603	262,612	213,368
Franklin	21.6	12,677	105,435	85,664
Arden	20.5	12,035	100,066	81,302
Tenby	4.1	2,400	20,013	16,260
Total	100.0	58,715	488,126	396,594
From: Howden				
To: Neepawa	48.1	7,740	74,842	47,984
Arden	29.8	4,800	46,368	29,728
Franklin	22.1	3,552	34,387	22,046
Total	100.0	16,092	155,597	99,758
From: Helston				
To: Firdale	45.4	19,560	135,615	119,290
Golden Stream	20.8	8,939	62,132	54,653
Arden	20.4	8,797	60,937	53,602
Gladstone	13.4	5,760	40,028	35,209
Total	100.0	43,056	298,712	262,754
From: Edwin				
To: Rignold	92.7	26,252	169,734	145,917
MacGregor	6.2	1,760	11,352	9,759
Treherne	1.1	320	2,014	1,732
Total	100.0	28,332	183,100	157,408
From: Rossendale				
To: Treherne	42.8	12,300	70,534	56,869
MacGregor	37.2	10,686	61,305	49,428
Rignold	20.0	5,751	32,960	26,574
Total	100.0	28,737	164,799	132,871
From: Moorepark				
To: Justice	85.0	19,919	171,726	151,614
Rapid City	6.1	1,440	12,324	10,881
Minnedosa	4.1	960	8,283	7,313
Franklin	2.7	640	5,455	4,816
Ingelow	2.1	480	4,243	3,746
Total	100.0	23,439	202,031	178,370
From: Brookdale				
To: Ingelow	83.9	45,666	485,911	391,351
Justice	8.3	4,538	48,070	38,715
Neepawa	6.3	3,440	36,487	29,387
Gregg	1.5	800	8,687	6,997
Total	100.0	54,444	579,155	466,450

TABLE 35. DIVERSIONS (FROM - TO), ACREAGES AND BUSHELAGES CONDITIONAL ON THE CLOSING OF SPECIFIED DELIVERY POINTS, 1962-63 (concluded)

Delivery Point Assumed Closed to Alternate Delivery Point	Percent Distribution of Acres	Acres Diverted 1962-63	Bushels Diverted	
			1962-63	8-Year Average 1962-63 to 1969-70
From: Oberon				
To: Ingelow	51.4	7,287	84,522	71,487
Gregg	32.9	4,660	54,101	45,758
Neepawa	15.7	2,228	25,817	21,836
Total	100.0	14,175	164,440	139,081
From: Wellwood				
To: Gregg	94.4	21,677	210,159	145,614
Fairview	3.5	800	7,792	5,399
Firdale	2.1	474	4,675	3,239
Total	100.0	22,951	222,626	154,252
From: Rufford¹				
To: Rapid City	54.4	7,277	51,306	43,125
Minnedosa	41.2	5,520	38,857	32,660
Justice	4.4	588	4,150	3,488
Total	100.0	13,385	94,313	79,273
From: Cordova				
To: Franklin	64.6	10,511	84,417	70,157
Justice	28.5	4,632	37,243	30,952
Minnedosa	6.9	1,120	9,016	7,493
Total	100.0	16,263	130,676	108,602
From: Mentmore				
To: Neepawa	41.3	9,274	82,433	68,661
Franklin	33.5	7,520	66,864	55,693
Ingelow	25.2	5,674	50,298	41,895
Total	100.0	22,468	199,595	166,249
STUDY AREA TOTAL		650,124	5,069,306	4,008,901

¹Closed 1968-69.

TABLE 36. DIVERSIONS (TO – FROM) ACREAGES AND BUSHELAGES CONDITIONAL ON THE CLOSING OF SPECIFIED DELIVERY POINTS, 1962-63.

Alternate Delivery Point from Delivery Points Assumed Closed	Percent Distribution of Acres	Acres Diverted 1962-63	Bushels Diverted	
			1962-63	8-Year Average 1962-63 to 1969-70
To: Fairview				
From: Wellwood	100.0	800	7,792	5,399
Total	100.0	800	7,792	5,399
To: Gladstone				
From: Helston	100.0	5,760	40,028	35,209
Total	100.0	5,760	40,028	35,209
To: Golden Stream				
From: Helston	100.0	8,939	62,132	54,653
Total	100.0	8,939	62,132	54,653
To: Rapid City				
From: Rufford	83.5	7,277	51,306	43,125
Moorepark	16.5	1,440	12,324	10,881
Total	100.0	8,717	63,630	54,006
To: Treherne				
From: Rossendale	97.5	12,300	70,534	56,869
Edwin	2.5	320	2,014	1,732
Total	100.0	12,620	72,548	58,601
To: MacGregor				
From: Rossendale	85.9	10,686	61,305	49,428
Edwin	14.1	1,760	11,352	9,759
Total	100.0	12,446	72,657	59,187
To: Tenby				
From: Birnie	80.0	9,590	60,077	39,616
Eden	20.0	2,400	20,013	16,260
Total	100.0	11,990	80,090	55,876
To: Firdale				
From: Helston	97.6	19,560	135,615	119,290
Wellwood	2.4	474	4,675	3,239
Total	100.0	20,034	140,290	122,529
To: Rignold				
From: Edwin	82.0	26,252	169,734	145,917
Rosendale	18.0	5,751	32,960	26,574
Total	100.0	32,003	202,694	172,491

TABLE 36. DIVERSIONS (TO – FROM) ACREAGES AND BUSHELAGES CONDITIONAL ON THE CLOSING OF SPECIFIED DELIVERY POINTS, 1962-63 (continued)

Alternate Delivery Point from Delivery Points Assumed Closed	Percent Distribution of Acres	Acres Diverted 1962-63	Bushels Diverted	
			1962-63	8-Year Average 1962-63 to 1969-70
To: Justice				
From: Moorepark	67.1	19,919	171,726	151,614
Cordova	15.6	4,632	37,243	30,952
Brookdale	15.3	4,538	48,070	38,715
Rufford	2.0	588	4,150	3,488
Total	100.0	29,677	261,189	224,769
To: Gregg				
From: Wellwood	79.9	21,677	210,159	145,614
Oberon	17.2	4,660	54,101	45,758
Brookdale	2.9	800	8,687	6,997
Total	100.0	27,137	272,947	198,369
To: Arden				
From: Eden	32.8	12,035	100,066	81,302
Birnie	30.1	11,040	69,013	45,510
Helston	24.0	8,797	60,937	53,602
Howden	13.1	4,800	46,368	29,728
Total	100.0	36,672	276,384	210,142
To: McCreary				
From: Kelwood	100.0	37,722	312,573	187,954
Total	100.0	37,722	312,573	187,954
To: Glenella				
From: Kelwood	46.1	27,151	225,419	135,547
Riding Mountain	35.2	20,762	116,536	100,316
Birnie	18.7	11,031	69,013	45,510
Total	100.0	58,944	410,968	281,373
To: Basswood				
From: Erickson	90.6	60,856	383,777	298,484
Clanwilliam	9.4	6,345	49,063	39,431
Total	100.0	67,201	432,840	337,915
To: Minnedosa				
From: Clanwilliam	59.7	41,567	319,470	256,750
Erickson	24.9	17,386	109,650	85,281
Rufford	7.9	5,520	38,857	32,660
Bethany	4.5	3,123	21,164	18,822
Cordova	1.6	1,120	9,016	7,493
Moorepark	1.4	960	8,283	7,313
Total	100.0	69,676	506,440	408,319

TABLE 36. DIVERSIONS (TO - FROM) ACREAGES AND BUSHELAGES CONDITIONAL ON THE CLOSING OF SPECIFIED DELIVERY POINTS, 1962-63 (concluded)

Alternate Delivery Point from Delivery Points Assumed Closed	Percent Distribution of Acres	Acres Diverted 1962-63	Bushels Diverted	
			1962-63	8-Year Average 1962-63 to 1969-70
To: Neepawa				
From: Eden	46.5	31,603	262,612	213,368
Mentmore	13.6	9,274	82,433	68,661
Howden	11.4	7,740	74,842	47,984
Birnie	10.1	6,884	42,947	28,321
Springhill	8.7	5,896	45,803	54,950
Brookdale	5.0	3,440	36,487	29,387
Oberon	3.3	2,228	25,817	21,836
Riding Mountain	1.4	960	5,403	4,651
Total	100.0	68,025	576,344	469,158
To: Ingelow				
From: Brookdale	77.3	45,666	485,911	391,351
Oberon	12.3	7,287	84,522	71,487
Mentmore	9.6	5,674	50,298	41,895
Moorepark	0.8	480	4,243	3,746
Total	100.0	59,107	624,974	508,479
To: Franklin				
From: Clanwilliam	29.7	24,581	189,006	151,899
Eden	15.3	12,677	105,435	85,664
Springhill	13.9	11,493	89,310	107,144
Cordova	12.7	10,511	84,417	70,157
Bethany	11.6	9,550	64,869	57,690
Mentmore	9.1	7,520	66,864	55,693
Howden	4.3	3,552	34,387	22,046
Birnie	1.4	1,170	7,199	4,747
Erickson	1.0	800	4,984	3,876
Moorepark	0.8	640	5,455	4,816
Riding Mountain	0.2	160	860	740
Total	100.0	82,654	652,786	564,472
STUDY AREA TOTAL		650,124	5,069,306	4,008,901

have the least effect at Fairview where the ratio would rise from 3.14 to 3.23.

It would appear that no addition to existing plant would be needed at the delivery points remaining open.

TABLE 37. RATIO OF GRAIN DELIVERIES TO STORAGE CAPACITY IF SPECIFIED DELIVERY POINTS HAD BEEN CLOSED, 1962-63 AND 1969-70

Delivery Point	1962-63 ¹	1969-70 ¹	1962-63 ²	1969-70 ²
Erickson	2.65	1.72	—	—
Clanwilliam	2.35	1.56	—	—
Bethany	1.85	1.45	—	—
Springhill	3.73	3.81	—	—
Kelwood	6.55	1.69	—	—
Riding Mountain	2.46	2.36	—	—
Birnie	7.93	3.34	—	—
Eden	2.83	1.84	—	—
Howden	2.73	.99	—	—
Helston	2.91	2.19	—	—
Edwin	3.26	2.11	—	—
Rossendale	2.14	1.38	—	—
Moorepark	2.55	2.31	—	—
Brookdale	3.25	1.95	—	—
Oberon	2.49	1.84	—	—
Wellwood	1.94	.88	—	—
Rufford	1.92	Closed	—	Closed
Cordova	2.67	1.91	—	—
Mentmore	2.25	1.78	—	—
Fairview	3.14	2.10	3.23	2.15
Gladstone	2.23	1.74	2.34	1.82
Golden Stream	3.35	3.70	5.16	5.06
Rapid City	3.66	2.36	4.16	2.45
Treherne	2.08	1.52	2.30	1.66
MacGregor	2.96	1.75	3.52	2.01
Tenby	2.54	1.40	3.74	1.97
Firdale	2.36	1.67	4.62	3.35
Rignold	1.74	2.18	4.22	3.78
Justice	2.39	1.32	4.98	3.42
Gregg	2.80	1.67	5.83	3.23
Arden	4.87	2.97	7.87	4.67
McCreary	3.99	3.15	6.05	3.94
Glenella	5.54	3.30	9.75	5.62
Basswood	4.29	1.59	8.60	3.19
Minnedosa	4.71	1.59	9.81	2.49
Neepawa	2.02	2.03	4.79	3.83
Ingelow	1.40	1.46	13.42	9.12
Franklin	1.96	1.16	5.78	3.94

¹Ratios of actual handlings for all points for crop year 1962-63 and 1969-70.

²Ratios after diversions from Erickson, Clanwilliam, Bethany, Springhill, Kelwood, Riding Mountain, Birnie, Eden, Howden, Helston, Edwin, Rossendale, Moorepark, Brookdale, Oberon, Wellwood, Rufford, Cordova and Mentmore for crop years 1962-63 and 1969-70.

Size of Hinterlands, Original and Enlarged

Table 38 provides information on the size of hinterlands, in acres, before and after diversion, based on the 1962-63 experience. Only hinterlands of the nineteen communities which remain open and which are affected are listed in this table. The largest original hinterland was Gladstone with 112,079 acres. The largest increased size of hinterland is at Glenella with 144,277 acres. The range of percentage increase is from 3.0 percent at Fairview to 591.5 percent at Ingelow. The original size of Ingelow was 9,992 and it increased to 69,099 acres. With nineteen communities suggested to be closed there was a total of 650,933 acres to be absorbed by the other communities.

TABLE 38. ORIGINAL SIZE OF HINTERLANDS, 1962-63, AND INCREASED SIZE OF HINTERLANDS OF DELIVERY POINTS BEING USED AS GRAIN DIVERSION POINTS

Division Point	Original Size 1962-63	Increased Size ¹	Additional Size	% Increase In Acres
— acres —				
Fairview	26,255	27,055	800	3.0
Gladstone	112,079	117,839	5,760	5.1
Golden Stream	13,155	22,094	8,939	68.0
Rapid City	58,706	67,423	8,717	14.8
Treherne	78,351	90,971	12,620	16.1
MacGregor	77,250	89,696	12,446	16.1
Tenby	21,949	33,939	11,990	54.6
Firdale	23,300	43,334	20,034	86.0
Rignold	21,178	53,181	32,003	151.1
Justice	63,943	93,620	29,677	46.4
Gregg	25,157	52,294	27,137	107.9
Arden	67,846	104,518	36,672	54.0
McCreary	95,091	132,813	37,722	39.7
Glenella	85,333	144,277	58,944	69.1
Basswood	47,589	114,790	67,201	141.2
Minnedosa	70,034	139,710	69,676	99.5
Neepawa	64,715	132,740	68,025	105.1
Ingelow	9,992	69,099	59,107	591.5
Franklin	33,779	116,433	82,654	244.7

¹ Assume Erickson, Clanwilliam, Bethany, Springhill, Kelwood, Riding Mountain, Birnie, Eden, Howden, Helston, Edwin, Rossendale, Moorepark, Brookdale, Oberon, Wellwood, Rufford, Cordova, and Mentmore closed.

Farm to Elevator Hauling Distances

Table 39 provides information concerning the length of haul from farm to elevator in the nineteen specified points that are assumed to be closed, based on the 1962-63 experience. The range of haul varies from 2.62 miles at Cordova to 7.99 miles at Erickson. If the elevator plant at these points were closed, the average hauling distance would rise. The least increase, 1.36 miles would occur in the Brookdale hinterland. The greatest would be at Erickson, where the average length of haul for permit holders who had been delivering to Erickson would be 21.77 miles, which would be an increase of 13.78 miles. The range of the new averages would be from 6.67 miles at Brookdale to 21.77 miles at Erickson.

Farm to Elevator Hauling Distances 1962-63, to Delivery Points Being Used as Grain Diversion Points.

Table 40 provides information concerning the length of haul from farm to elevator in the nineteen points that are assumed to remain open and which would receive grain from the farms in the hinterlands of the nineteen points which are assumed to be closed. The range of the average hauls of these points varies from 3.06 miles at Ingelow to 10.14 miles at McCreary. With the reallocation of the land of the hinterlands assumed to be closed, there would be an increased average haul for the farmers to the remaining open communities. This increased average distance ranges from .04 miles at Justice to 9.81 miles at Basswood. The post diversion average hauling distance ranges from 3.88 miles at Fairview to 15.48 miles at Basswood.

There would be no change in hauling distances for farmers in the hinterlands of Macdonald, Westbourne, Beaver, Sidney, Carberry, Colby, Katrime, Forrest, Plumas, Austin and Brandon. These delivery points would not be affected by the suggested rationalization scheme.

Number of Permit Holders

Table 41 shows the number of permit holders in the Brandon-Neepawa Region. The breakdown of permits for each of the 49 delivery points in the study area is given. The number of permit holders delivering to the nineteen points assumed to be closed is 1,627 which is 31.3 percent of the total number of permit holders in the study.

Franklin gained the largest number of permit holders with an increase of 256 permits added on to the original 85. Many delivery points more than doubled their number of permits, for example: Rignold, from 50 to 132; Gregg, from 52 to 110; Basswood, from 109 to 288; Minnedosa, from 142 to 313; Neepawa, from 166 to 342 and Ingelow from 20 permits to 136 permits. Twelve communities would not be affected by the suggested alternative delivery pattern.

TABLE 39. AVERAGE FARM-TO-ELEVATOR HAULING DISTANCES IN THE STUDY AREA, 1962-63,
AND ESTIMATED AVERAGE IF SPECIFIED ELEVATOR POINTS HAD BEEN CLOSED

Specified Points	Average Distance	Average Distance ¹
— miles —		
Erickson	7.99	21.77
Additional Haul		13.78
Clanwilliam	7.57	15.04
Additional Haul		7.47
Bethany	3.09	7.90
Additional Haul		4.81
Springhill	4.00	8.18
Additional Haul		4.18
Kelwood	5.57	11.27
Additional Haul		5.70
Riding Mountain	4.07	13.99
Additional Haul		9.92
Birnie	5.41	14.43
Additional Haul		9.02
Eden	6.70	13.89
Additional Haul		7.19
Howden	5.99	8.42
Additional Haul		2.43
Helston	5.36	9.60
Additional Haul		4.24
Edwin	4.73	12.01
Additional Haul		7.28
Rossendale	3.98	14.90
Additional Haul		10.92
Moorepark	4.29	7.52
Additional Haul		3.23
Brookdale	5.31	6.67
Additional Haul		1.36
Oberon	3.60	9.21
Additional Haul		5.61
Wellwood	3.66	7.08
Additional Haul		3.42
Rufford	3.32	7.55
Additional Haul		4.23
Cordova	2.62	9.72
Additional Haul		7.10
Mentmore	3.77	9.38
Additional Haul		5.61

¹ Assume Erickson, Clanwilliam, Bethany, Springhill, Kelwood, Riding Mountain, Birnie, Eden, Howden, Helston, Edwin, Rossendale, Moorepark, Brookdale, Oberon, Wellwood, Rufford, Cordova and Mentmore closed.

TABLE 40. AVERAGE FARM-TO-ELEVATOR HAULING DISTANCES IN THE STUDY AREA, 1962-63,
OF DELIVERY POINTS BEING USED AS GRAIN DIVERSION POINTS

Diversion Points	Average Distance	Average Distance ¹
— miles —		
Fairview	3.82	3.88
Additional Haul		0.06
Gladstone	6.84	6.92
Additional Haul		0.08
Golden Stream	3.07	5.55
Additional Haul		2.48
Rapid City	5.51	5.80
Additional Haul		0.29
Treherne	6.89	7.90
Additional Haul		1.01
MacGregor	6.58	7.56
Additional Haul		0.98
Tenby	6.24	7.66
Additional Haul		1.42
Firdale	3.19	5.83
Additional Haul		2.64
Rignold	4.05	9.47
Additional Haul		5.42
Justice	7.80	7.84
Additional Haul		0.04
Gregg	3.95	5.71
Additional Haul		1.76
Arden	6.01	7.53
Additional Haul		1.52
McCreary	10.14	10.38
Additional Haul		0.24
Glenella	8.52	10.34
Additional Haul		1.82
Basswood	5.67	15.48
Additional Haul		9.81
Minnedosa	5.73	10.44
Additional Haul		4.71
Neepawa	6.01	9.25
Additional Haul		3.24
Ingelow	3.06	6.62
Additional Haul		3.56
Franklin	4.62	11.20
Additional Haul		6.58

¹ Assume Erickson, Clanwilliam, Bethany, Springhill, Kelwood, Riding Mountain, Birnie, Eden, Howden, Helston, Edwin, Rossendale, Moorepark, Brookdale, Oberon, Wellwood, Rufford, Cordova and Mentmore closed.

TABLE 41. NUMBER OF PERMIT HOLDERS, BY DELIVERY POINT, AND ESTIMATED NUMBER IF CERTAIN GRAIN DELIVERY POINTS WERE CLOSED

Delivery Point	Number of Permit Holders 1962-63	Estimated Number of Permit Holders 1962-63 ¹
Erickson	201	—
Clanwilliam	211	—
Bethany	28	—
Springhill	50	—
Kelwood	178	—
Riding Mountain	61	—
Birnie	86	—
Eden	173	—
Howden	51	—
Helston	91	—
Edwin	69	—
Rossendale	70	—
Moorepark	59	—
Brookdale	99	—
Oberon	33	—
Wellwood	50	—
Rufford	31	—
Cordova	42	—
Mentmore	44	—
Macdonald	21	21
Westbourne	37	37
Beaver	39	39
Sidney	76	76
Carberry	77	77
Colby	86	86
Katrime	116	116
Forrest	116	116
Plumas	128	128
Austin	151	151
Brandon	377	377
Fairview	56	57
Gladstone	249	255
Golden Stream	34	55
Rapid City	135	156
Treherne	205	233
MacGregor	179	208
Tenby	59	79
Firdale	58	107
Rignold	50	132
Justice	107	179
Gregg	52	110
Arden	141	216
McCreary	283	398
Glenella	224	370
Basswood	109	288
Minnedosa	142	313
Neepawa	160	342
Ingelow	20	136
Franklin	85	341
Study Area Total	5,199	5,199

¹ Assume Erickson, Clanwilliam, Bethany, Springhill, Kelwood, Riding Mountain, Birnie, Eden, Howden, Helston, Edwin, Rossendale, Moorepark, Brookdale, Oberon, Wellwood, Rufford, Cordova and Mentmore closed.

TABLE 42. PRODUCERS' CHOICE OF OFFICIAL ALTERNATE DELIVERY POINT, 1970-71

Base Point	Number of Farmers	Option not Exercised	Next Nearest Elevator	Loading Block			Large Centre ¹	
				Different	Same	Double		
<i>Too Small to Classify</i>								
Rufford	Closed			— per cent of number of farmers —				
Colby	72	22.2	47.2	0.0	73.6	4.2	0.0	
Rignold	40	5.0	95.0	10.0	5.0	80.0	80.0	
Howden	21	0.0	100.0	9.5	33.3	57.1	57.1	
Springhill	46	4.3	93.5	6.5	32.6	56.5	56.5	
Fairview	52	0.0	57.7	69.2	0.0	30.8	30.8	
Golden Stream	44	0.0	86.4	4.5	31.8	63.6	2.3	
Tenby	36	38.9	52.8	0.0	61.1	0.0	0.0	
Total	311	10.9	71.7	15.1	36.3	37.6	28.0	
<i>Hamlets</i>								
Cordova	Closed							
Gregg	51	19.6	37.2	72.5	2.0	5.9	5.9	
Mentmore	38	0.0	97.4	39.5	0.0	60.5	60.5	
Oberon	30	0.0	10.0	40.0	10.0	50.0	50.0	
Moorepark	66	0.0	48.5	47.0	37.9	15.2	50.0	
Beaver	38	0.0	76.3	44.7	31.6	23.7	23.7	
Firdale	47	97.9	2.1	2.1	0.0	0.0	0.0	
Katrima	66	1.5	77.3	21.2	56.1	21.2	7.6	
Ingelow	19	0.0	84.2	21.0	78.9	0.0	0.0	
Edwin	57	0.0	98.2	5.3	15.8	78.9	78.9	
Justice	76	2.6	19.7	17.1	5.3	75.0	75.0	
Helston	87	0.0	81.6	13.8	16.1	70.1	4.6	
Bethany	23	0.0	100.0	91.3	8.7	0.0	91.3	
Franklin	62	0.0	95.2	12.9	29.0	58.1	85.5	
Birnie	62	0.0	71.0	3.2	93.5	3.2	3.2	
Forrest	92	2.2	81.5	8.7	7.6	81.5	81.5	
Macdonald	78	47.4	52.6	16.7	7.7	28.2	28.2	
Wellwood	37	2.7	59.4	75.7	8.1	13.5	13.5	
Total	929	10.6	63.9	25.7	23.0	40.6	40.0	
<i>Villages</i>								
Riding Mountain	65	72.3	18.5	0.0	26.2	1.5	1.5	
Rosendale	57	0.0	26.3	26.3	5.3	68.4	68.4	
Clanwilliam	169	12.4	76.9	49.7	37.9	0.0	47.9	
Basswood	97	2.1	93.8	14.4	81.4	2.1	64.9	
Sidney	53	0.0	90.6	34.0	60.4	5.7	5.7	
Eden	152	9.9	54.6	8.2	53.3	27.6	27.6	
Brookdale	76	1.3	43.4	60.5	14.5	23.7	42.1	
Westbourne	38	26.3	52.6	15.8	36.8	21.0	15.8	
Arden	100	13.0	85.0	26.0	0.0	61.0	48.0	
Glenella	154	36.4	55.8	14.3	49.4	0.0	0.0	
Kelwood	123	11.4	87.8	52.8	35.8	0.0	0.0	
Plumas	101	11.9	77.2	9.9	27.7	50.0	0.0	
Total	1,185	16.1	66.5	27.0	37.9	19.0	26.6	

TABLE 42. PRODUCERS' CHOICE OF OFFICIAL ALTERNATE DELIVERY POINT, 1970-71 (concluded)

Base Point	Number of Farmers	Option not Exercised	Next Nearest Elevator	Loading Block			Large Centre ¹				
				Different	Same	Double					
— per cent of number of farmers —											
<i>Towns</i>											
Austin	108	12.0	56.5	36.1	39.8	12.0	4.6				
Rapid City	101	2.0	46.5	17.8	64.4	15.8	43.6				
McCreary	244	48.8	48.8	33.6	17.2	0.4	0.4				
Total	453	29.6	50.1	30.7	33.1	6.6	11.0				
<i>Greater Towns</i>											
Erickson	190	11.6	74.7	14.7	73.7	0.0	13.7				
Treherne	175	2.3	78.3	24.6	71.4	1.7	1.7				
MacGregor	129	51.9	40.3	19.4	7.0	21.7	21.7				
Carberry	53	7.5	60.4	73.6	15.1	3.8	11.3				
Gladstone	205	61.0	29.8	0.0	35.6	3.4	1.0				
Minnedosa	175	20.0	41.7	12.6	51.4	16.0	16.0				
Neepawa	143	32.2	58.7	0.0	67.8	0.0	0.7				
Total	1,070	28.3	54.3	14.7	50.6	6.4	8.8				
<i>Cities</i>											
Brandon	388	28.4	26.0	45.4	21.9	4.4	6.2				
Study Area Total	4,336	20.1	58.0	24.9	35.8	19.2	21.7				

¹ Minnedosa, Neepawa, Brandon, Portage-la-Prairie, Dauphin, or Winnipeg

Producers' Choices of Official Alternate Delivery Point

For the first time in the history of Canadian Wheat Board control, producers in 1970-71 were given the right to select a second delivery point in addition to their basic choice. Thus it is now possible to speculate on the reasoning underlying the producers' choice of delivery point when faced with their being denied access to their basic elevator for any reason.

Table 42 contains information as to choice of alternative point. Eighty percent of the producers exercised their right to select a second station. In the smaller communities this averaged ninety percent compared to only seventy percent in the towns. In Brandon 110 out of 388 farmers declined to name a second point, and in Gladstone 125 failed to do so.

The reason for choosing the second nomination was examined from the point of view of a) the next nearest community, b) the loading block, and c) the size of the centre chosen. Fifty-eight percent of the producers selected the next nearest elevator point. This averaged seventy-two percent in those places grouped in the too-small-to classify group and ranged down to twenty-six percent of the farmers normally delivering to Brandon. It would appear that distance from their elevator is more important to those farmers in the very small community hinterlands than it is to those normally hauling to a large community.

Choosing an elevator situated on a different loading block did not appear to be all that attractive. If the next nearest centre happened to be on a different loading block that was all well and good, but there was little evidence in the study area of a different loading block

having any great importance. Certain centres such as Brandon, Neepawa and Gladstone are located on two blocks and no doubt this weighed in their favour. However it is not possible to demonstrate that this factor was any more important than that of the size of the community in reaching a decision as to where to deliver.

Farmers adjacent to the villages, hamlets and smaller communities showed a greater desire to have a large centre (Minnedosa, Neepawa, Brandon, Portage, Dauphin or Winnipeg) for their alternate point than did those normally hauling their grain to the towns or larger communities. This may be for the same reason that more producers using the large communities failed to exercise their option than did those in the smaller places, and that reason could be a general satisfaction with marketing opportunities in these bigger centres.

The choice of Winnipeg as an alternate point is interesting, inasmuch as it is located about 125 miles east of Brandon. The choice of twenty or more official receiving elevators in the Winnipeg Metropolitan area apparently outweighed the distance as a factor for some farmers. Producers located in the hinterlands of Austin, Brandon, Carberry, Fairview, Gregg, Minnedosa, Sidney, Treherne and Gladstone chose Winnipeg as their official alternate point.

In analysing the data some multiple counting was permitted. For instance 45 of the 57 farmers tributary to Edwin chose Portage-la-Prairie as their alternate. Portage is their next nearest point, but it is also located on two loading blocks and is a large community. Thus the analysis credits all three factors.

PART V

REGULATION OF GRAIN INDUSTRY

Regulation of the Grain Industry

The unfairness inherent in a situation involving a large number of sellers facing a very few buyers, which is what prevails in prairie grain marketing, led to the very high degree of regulation that characterizes the industry today. This takes the form of regulation of the grain warehouse industry, i.e., the elevators, by the Canadian Grain Commission; regulation of the grain marketers, including the producers, by the Canadian Wheat Board; and regulation of the grain carriers; i.e., railways, truckers, and lake vessel operators, by those two bodies plus the Canadian Transport Commission.

The following description of the activity of these regulatory bodies is not intended to be exhaustive by any means. It covers the main areas of the impact of regulation on producers, elevator operators and railways. It is included here in order to complete the picture shown in these Prairie Regional Studies in Economic Geography, because it is believed that the welfare of the farms and the communities is significantly influenced by regulation.

Canada Grain Act, R.S.C. 1970 Ch. G-16

The Canadian Grain Commission superseded the Board of Grain Commissioners for Canada on April 1, 1971, by virtue of an amended Canada Grain Act passed by the Federal Parliament in 1970. Among several important changes in the Act is the definition of an elevator, (Section 2). For licensing purposes it is no longer required that the elevator be situated on a railway right-of-way. Any premises that meet certain construction standards specified by the Commission and

where bulk grain can be received, weighed, elevated, stored and discharged into a transport conveyance qualifies for application for a licence to handle western grain.

The once familiar term "country elevator" has been changed to "primary elevator", for regulation purposes. It is defined as "an elevator the principal use of which is the receiving of grain directly from producers".

The costs of the Canadian Grain Commission are borne by the Federal Treasury, not by the farmers. The commissioners and their staff are public servants.

The Commission establishes and maintains standards of quality for Canadian grain, in the interests of the grain producers.

'Any dispute between the grain producer and grain buyer as to grade or dockage is settled by referring a small sample of the parcel of grain to the Canadian Grain Commission. As far as weighing goes, the elevator operator must allow the farmer every opportunity to verify the weight of his grain.

The Commission may consent to the mixing of different grades of grain in terminal and transfer elevators. Without such consent no such mixing is permitted. The Commission periodically checks the inventory of grain in each and all elevators.

Only a public carrier may transport grain described by an official grade name across a provincial boundary. Only a public carrier may transport any grain from Western Canada to Eastern Canada or out of Canada. On the

other hand a public carrier may not deliver grain to a primary elevator without the consent of the Canadian Grain Commission.

Grain producers who qualify to ship a complete carload of grain to a terminal or a transfer elevator may have a rail car allocated to them for this purpose by the Canadian Grain Commission. Where it is in the public interest to do so the federal cabinet can order a railway company to spot cars for transporting grain at any point where the railway company supplies service. In such cases it is the grain producer's right to select the elevator of his choice or to load directly into the rail car.

The car order book is no longer used as the legal instrument to ensure equity in rail car supply.

The Canadian Grain Commission can issue regulations governing the activity in all the licenced elevators in order to ensure the orderly movement of grain.

The Canadian Grain Commission can set maximum freight rates for the carriage of Canadian grain by lake vessel between any Canadian points. This responsibility is given to the Commission under the Inland Water Freight Rates Act.

The Canadian Wheat Board Act R.S.C. 1970 Ch. C-12

The Canadian Wheat Board was created in the mid-depression year of 1935 when the prairie wheat pools and the prairie provincial governments, who had guaranteed the pools' bank loans, proved to be incapable of surviving the tremendous pressures caused by a great scarcity of sales all over the world together with below-cost prices for the wheat that was sold. Today the Canadian Wheat Board plays

a dominant role in the marketing of grain in Western Canada. The Board has an indirect impact on the production of virtually all crops in the prairie provinces.

The Board consists of five commissioners appointed by the federal cabinet. It employs 575 support staff. Board members and staff receive their salaries and wages out of the proceeds from the sale of the farmers' grain. Indeed all the costs of the operation of the Canadian Wheat Board are borne by the grain producers collectively. Some assistance is received by them from the federal treasury to cover part of the cost of storing wheat in commercial positions, i.e., off the farm. (See note on the Temporary Wheat Reserves Act.)

The Canadian Wheat Board has permanent offices in Winnipeg, Vancouver, Montreal, London England, and Tokyo. The Board uses the established grain export companies as their selling arm, on an agency basis. They have 25 firms which act as their shippers and exporters via the Lakehead and eastern route, and 17 firms via the Pacific Coast ports.

The Canadian Wheat Board has no assets of its own. It has no funds. It retains no profits. The money to pay for the wheat, durum, oats, and barley delivered by the producers is obtained by borrowing from the chartered banks. The cost of this money is borne by the producers. Nor does the Board own or operate grain handling, storage or transportation facilities. It contracts with the licensed primary elevator operators to act as buying and forwarding agents.

The object of the Board is to market grain in an orderly manner. Their marketing function is limited to interprovincial and export trade. Grain marketed intraprovincially does not come under the Wheat Board's jurisdiction,

although it does extend to all elevators, flour mills, feed mills, feed warehouses and seed cleaning mills.

Cabinet appoints an eleven-member Advisory Committee, of which at least six members represent wheat producers.

Cabinet has the authority to direct the Board as to the manner in which it is to conduct its operations, but in practice the Board has operated with a great deal of autonomy.

Elevators are operated for and on behalf of the Board. Only Board agents may operate an elevator, unless the Board excepts that elevator from the provisions of the Canadian Wheat Board Act.

The Wheat Board has the authority to limit individual producers' deliveries of grain. This is accomplished in a routine fashion by the issuing of permit books and by the fixing of delivery quotas at specified delivery points, together with some special delivery quotas for selected grain.

Only the producer of the grain is permitted to deliver grain to an elevator. (Producer includes the actual producer and any person entitled as the landlord, vendor or mortgagee, to the grain.)

Bonafide grain producers are entitled to have a permit book issued to them by the Board. The actual producer of the grain has the prior right to possession of the permit book. Only one permit book may be issued per farm unit. Where there are two or more producers entitled to the grain from a farm unit, none can deliver in excess of his proper share of the delivery quota.

Only producers who are permit book holders

may deliver grain to a licensed elevator and then only to one of the two delivery points named in the individual's permit book. Normally the producer chooses the delivery point, but the Wheat Board does have the authority to prescribe the delivery point.

The quantity of grain delivered must not exceed the quota established at the time of delivery for the kind of grain being delivered and for the point stipulated. A record of all deliveries must be entered in the permit book.

Provided all the Board's orders and regulations have been complied with, the Board must buy all the wheat, durum, oats, and barley offered by a bonafide producer. The Board must pay the appropriate initial payment on delivery. Normally this is done by the elevator operator, acting on behalf of the Board. He is compensated for all his costs when the grain is delivered to the Board at a terminal or mill elevator.

A record of the grain delivered and the payment is entered into an accounting pool, along with all the other grain of like kind and grade delivered in the same crop year. Each producer participating in the pool shares in the equitable distribution of the pool surplus. The accounting pool period coincides with the crop year.

Only grain that has been taken into an elevator in accordance with the Wheat Board's orders and regulations may be loaded into a railway car.

The Wheat Board has the authority to order grain, by grade, to be loaded out of any elevator into railway cars or lake vessels. Thus grain is shipped out of the primary country elevators according to the shipping orders issued by the Board to its agents, the elevator

operators. The Board also has the authority to prohibit the movement of any kind of grain out of an elevator. The Board can allocate railway cars to specific persons or elevators at specific delivery points. However, in the normal course of events it refrains from becoming so specific, preferring to allocate shipping orders and cars en masse to its agents for movement out of elevators situated on specified loading blocks.

Nowadays only the grain that is produced in the "designated area" comes under the jurisdiction of the Canadian Wheat Board. This is most of the grain produced in Canada, of course. The designated area comprises all of Manitoba, Saskatchewan and Alberta plus the Peace River Block and the Creston-Wynndel areas, both in British Columbia, and a small area in the Rainy River region of Ontario near the Manitoba border.

After the Wheat Board has received payment for the wheat, durum, oats and barley delivered to the Board's respective pools, a distribution of the balance remaining in the accounts after deduction of all charges against the grains is made in the form of a final payment. This cheque is mailed to the producers from the Board six to nine months after the pool has been closed for deliveries at the end of the crop year. The amount per bushel of the final payment depends on the grade of the grain, and on the prices obtained by the Board.

The Canadian Wheat Board has the authority to prohibit the export from or import into Canada of any wheat, durum, oats, barley or the products thereof. Likewise it can prohibit the transport of these grains from one province in Canada to another. Indeed, only the Board is permitted to contract these grains for sale anywhere other than the

province of origin of the grain. The Board may grant licences for the export or import of wheat, durum, oats or barley, as well as for the transport of these grains across provincial boundaries.

Temporary Wheat Reserves Act

This Act was passed by the federal parliament in 1956. As explained by the Minister of Trade and Commerce at the time, it was in lieu of a two-price system.

The legislation gave the federal government the responsibility for payment of both the storage and the bank interest costs for 365 days on those Canadian Wheat Board holdings of wheat and durum in excess of 178 million bushels that happen to be in commercial (i.e., off-farm) storage at opening of business on the first day of each crop year, i.e., August 1. The rates paid per bushel are those prevailing on the last day of the previous crop year, i.e. July 31.

The purpose of the Act is to relieve the Canadian Wheat Board, and thus the western wheat producers, from the burden of paying the carrying costs on abnormally large stocks of wheat and durum. Without the Act the Wheat Board might be forced into panic methods of disposing of this grain, in violation of their duty to market wheat in an orderly manner.

The federal treasury makes monthly payments to the Canadian Wheat Board of one-twelfth of the amount of the carrying charges on the excess stocks. This total is prorated in the accounting pools and is eventually paid out to the producers as part of the final payment.

If at the beginning of a crop year the Board's stocks of wheat and durum are not more than

178 million bushels, then no more payments are to be made for that or any subsequent crop year. In other words the Temporary Wheat Reserves Act would be null and void. Thus, to that extent, the act is a temporary one.

National Transportation Act R.S.C. 1970 Ch. N-17.

The National Transportation Act became law in 1967 with the declared credo that "an economic and efficient transportation system, making the best use of all available modes of transportation at the lowest total cost, is essential to protect the interests of the users of transportation and to maintain the economic well-being and growth of Canada

The Act established the Canadian Transport Commission and dissolved the Board of Transport Commissioners for Canada. Under the new Commission several committees were established. The one that has an impact on grain production and marketing in Western Canada is known as the Railway Committee. There are seventeen commissioners, five of whom serve on this latter committee.

The commissioners are appointed by the federal cabinet. They and their staff are government employees, and their salaries are paid for by the federal treasury.

The commission administers the Railway Act. It has the authority to regulate and licence any mode of transport in Canada, including control over rates and tariffs charged and the administering of transport subsidies voted by Parliament.

Any person may apply to the commission for permission to appeal a rate set by a carrier, if he believes that the effect of the rate would

be prejudicial to the public interest. If, following a hearing, the commission concurs, it may make an order requiring the carrier to remove the prejudicial feature of the rate. At such a hearing representatives of provincial or municipal governments and of shippers or consignees are entitled to appear.

The greatest impact of the National Transportation Act on the grain production and marketing system stems from the provisions covering the abandonment of uneconomic branch lines. Branch line includes all subsidiary, secondary, local or feeder lines of railway. Segments of branch lines may also be applied for.

The commission sets the rules governing the filing of abandonment applications and the determination of whether or not the branch line in the application is indeed eligible for abandonment on economic grounds.

The commission holds public hearings on the question of abandonment of the branch line to hear all persons who wish to present their views. On the basis of the application and the hearing, the commission determines whether or not the branch line is uneconomic, is likely to continue to be uneconomic and whether the line should be closed down or remain open. Only lines that have incurred an actual operating loss in the last accounting year may be given permission to cease operating.

A hearing can cover several applications at the same time if the branch lines in question are in the same or adjoining areas. The commission has the authority to determine the order in which applications may be considered, although it may request the submitting railway company to specify its preferred order.

In determining whether or not a branch line may be abandoned, the commission considers, among other factors, the public interest; the actual losses incurred; the alternative transportation facilities; the adjustment period required; the disruption to the economy of the communities and the area; the effect on other lines and other carriers; the feasibility of maintaining the line or any part of it by, a) changing the method of operation, b) interconnecting with another line, c) sale or lease of the line or part of it to another railway company, d) exchanging running rights, e) constructing connecting lines with lines of another company; the known or potential resources of the area; the seasonal restrictions on other forms of transport; and the future transportation needs of the areas.

When the commission decides that a branch line or segment ought to be abandoned, it sets a closing date between one month and five years following the date of the abandonment order. The railway company must cease its operation of that line on the specified date.

When the commission is not satisfied that the line ought to be abandoned it orders the railway to continue its operation but reconsiders the abandonment application periodically in the light of new conditions that may emerge.

The commission may recommend to the railway companies the rationalization of their lines through the exchange of branch lines between companies, through the exchange of running rights on other lines and through the connecting of lines of rival companies, even though no application for abandonment has been filed on the lines in question. The commission may also recommend to the rail

companies that applications for abandonment of branch lines be filed.

Where the commission has determined that a branch line is indeed uneconomic but the line continues to operate, the railway company is entitled to claim for the actual loss accruing to that line in each fiscal year. The commission in such cases must examine the figures in the claim and recommend to the Minister of Finance that the rail company in question be paid the verified amount of the loss.

Cabinet may designate specific branch lines that are not permitted to be abandoned during set periods. This was done for the so-called protected lines that may not be closed before January 1, 1975. If losses are incurred in the operation of such lines the rail company may claim for the losses, even though no application has been filed. The claim may be paid, on the recommendation of the commission.

The National Transportation Act again makes statutory the rail freight rates on grain set by the "Act to Authorize a Subsidy for a Railroad through the Crows Nest Pass" S.C. 1897 c.5. For the first time it makes statutory the rail freight rates on grain moving from prairie points to the Pacific Coast ports and Churchill, for export, at the levels prevailing on December 31, 1966. These rates now require an Act of Parliament to be changed. Before the National Transportation Act was passed the export freight rates to the Pacific were set by an order of the Board of Transport Commissioners and the level of these rates was established having regard to the Crows Nest rates on grain moving eastward to the Lakehead.

**Chronology of Government Legislation, Court Rulings, Board Orders,
Regulations, etc.,
Having an Impact on Production and Marketing of Grain in Western Canada.**

- 1872 Dominion Land Act S.C. 1872, C.6.
- 1876 First export of wheat from the Prairies.
- 1878 St. Paul Railway entered Winnipeg.
- 1881 First elevator built in Western Canada.
- 1881 Canadian Pacific Railway completed between Fort William and Winnipeg.
- 1882 First cargo of wheat left the Lakehead (Fort William).
- 1883 First elevator built at the Lakehead (Port Arthur).
- 1885 First all-Canadian rail link (Canadian Pacific) between the Prairies and Pacific Coast opened.
- 1887 Formation of the Winnipeg Grain Exchange.
- 1897 An Act to authorize a subsidy for a Railroad through the Crows Nest Pass S.C. 1897, C.5. (Crows Nest Freight rates on western grain moving to Fort William).
- 1899 Royal Commission on the Shipment and Transportation of Grain.
- 1900 Manitoba Grain Act S.C. 1900, C.39.
- 1904 Building of the western portion of the Grand Trunk Pacific to Prince Rupert, (Completed 1912).
- 1904 Grain Inspection Act S.C. 1904, C.15.
- 1905 Introduction of Marquis Wheat.
- 1906 Royal Commission on the Grain Trade in Canada.
- 1908 Winnipeg Grain Exchange reformed; became an unincorporated voluntary association.

- 1911 Act creating the Saskatchewan Co-operative Elevator Company.
- 1912 Canada Grain Act S.C. 1912, C.27. et seq. established the Board of Grain Commissioners.
- 1912 First Canadian Government Elevator opened, at Port Arthur.
- 1914 First Canadian Government Interior Terminal Elevators opened, at Moose Jaw and Saskatoon.
- 1915 Panama Canal opened.
- 1916 First Canadian Government Elevator on the Pacific Coast opened.
- 1916 United Grain Growers formed from amalgamation of three grain growers associations and the Alberta Farmers' Co-op Elevator Company.
- 1917 Board of Grain Supervisors P.C. 1917-1552 (to June 6, 1919).
- 1919 Soldiers Settlement Act S.C. 1919, C.19 et seq.
- 1919 Canadian Wheat Board Act S.C. 1919, C.9 (to 1922).
- 1923 Royal Grain Inquiry Commission P.C. 1923-774.
- 1923 Prairie Wheat Pools formed.
- 1925 Major revision of the Canada Grain Act.
- 1928 Select Standing Committee of the House of Commons dealt with the grading of wheat by protein content.
- 1929 Hudson Bay Railway completed to Port Churchill.
- 1929 Welland Ship Canal expanded and modernized.
- 1929 Prairie Provincial Governments guaranteed bank loans to the three Wheat Pools.
- 1930 Dominion Government provided financial assistance to the banks and the provincial governments covering grain loans.

- 1930 Mr. John I. McFarland appointed by the Federal Government as general manager of the Canadian Co-op. Wheat Producers' Ltd.
- 1930 Revision of the Canada Grain Act S.C., 1930 C.5 et seq.
- 1931 Prairie Wheat Pools separated from their Central Selling Agency the Canadian Co-operative Wheat Producers Ltd.
- 1931 An Act Respecting Wheat S.C. 1931, C.60 (5¢ freight subsidy).
- 1931 Commission to Inquire into Trading in Grain Futures P.C. 1931-853.
- 1931 Grain Marketing Act S.S. 1931, C.87 (100% pool).
- 1931 First shipment of wheat through Port Churchill.
- 1932 Ottawa Economic Conference: Canada obtained preference on wheat in British market.
- 1933 United States legislation, the Agricultural Adjustment Act; parity prices established.
- 1933 Commodity Credit Corporation established in U.S.A.
- 1933 London Wheat Conference and subsequent International Wheat Agreement.
- 1934 Farmers' Creditors Arrangement Act S.C. 1934, C.53.
- 1934 Natural Products Marketing Act S.C. 1934, C.57.
- 1934 Natural Products Marketing Act ruled ultra vires of the Dominion Government by the Supreme Court of Canada.
- 1934 Emergency Wheat Control Act S.M. 1934, C.48.
- 1935 Prairie Farm Rehabilitation Act S.C. 1935, C.23 et seq.
- 1935 Canadian Wheat Board Act S.C. 1935, C.53 et seq.
- 1936 Royal Grain Inquiry Commission P.C. 1936-1577.

- 1938 Canada-United States trade agreement (abrogated British preference on Canadian Wheat).
- 1939 Agricultural Products Co-operative Marketing Act S.C. 1939, C.28 et seq.
- 1939 Grain Futures Act S.C. 1939, C.31.
- 1939 Prairie Farm Assistance Act S.C. 1939, C.50 et seq.
- 1939 Canadian Wheat Board opened Eastern office in Toronto.
- 1940 First implementation of delivery quota systems of control over western grain marketing.
- 1941 Wheat Acreage Reduction Regulations P.C. 1941-3047.
- 1941 Feed Freight Assistance Regulations P.C. 1941-7523 et seq.
- 1942 Wheat Acreage Reduction Act S.C. 1942, C.10.
- 1942 Veterans Land Act S.C. 1942-43, C.33 et seq.
- 1943 Wheat Futures Trading discontinued on the Winnipeg Grain Exchange; Canadian Wheat Board made exclusive marketing agency for wheat.
- 1944 Farm Improvement Loans Act S.C. 1944, C.41 et seq.
- 1944 Agricultural Prices Support Act.
- 1944 Canadian Wheat Board Act amended to exempt the Board from authority in marketing Eastern Wheat P.C. 1944-5640.
- 1945 The Food and Agriculture Organization of the United Nations Act S.C. 1945, C.4 et seq.
- 1946 United Kingdom Wheat Agreement.
- 1948 Canadian Wheat Board empowered to control interprovincial movement of wheat products.
- 1948 International Wheat Agreement (No.1) P.C. 1948-1016.

- 1949 Manitoba Coarse Grain Marketing Control Act R.S.M. 1954, C.41.
- 1949 Saskatchewan Grain Marketing Act R.S.S. 1953, C.241.
- 1949 Alberta Coarse Grain Marketing Control Act S.A. 1949, C.25.
- 1949 Marketing of oats and barley brought under the Canadian Wheat Board.
- 1951 Appropriations Act No.2 1951, C.2, provided for a grant of \$65 million to the 1945-49 Pool as settlement to western grain producers for participation in the United Kingdom Wheat Agreement.
- 1951 St. Lawrence Seaway Authority Act S.C. 1951, C.24 et seq.
- 1951 Prairie Grain Producers Interim Financing Act S.C. 1951, C.20 et seq.
- 1952 Extension of Colombo Plan to wheat aid.
- 1953 International Wheat Agreement (No. 2) P.C. 1953-556.
- 1953 Application of accelerated depreciation for Income Tax purposes to commercial grain storage facilities.
- 1954 Canada-Japan trade agreement extended M.F.N. rates to Japan and opened Japanese market to Canadian grain.
- 1954 Inauguration of United States Public Law 480.
- 1955 Churchill elevator capacity doubled.
- 1955 GATT resolution on surplus disposal.
- 1956 Canada-U.S.S.R. trade agreement extended M.F.N. rates to U.S.S.R., which government agreed to buy 1.2 million tons of Canadian Wheat.
- 1956 First shipment of flour to United Nations Relief and Works Agency.
- 1956 Prairie Grain Producers Interim Financing Act S.C. 1956, C.1.

- 1956 Temporary Wheat Reserves Act S.C. 1956, C.2.
- 1956 International Wheat Agreement (No. 3) P.C. 1956-734.
- 1957 Prairie Grain Advance Payments Act S.C. 1957, C.2.
- 1957 Establishment of FAO Group on Grains.
- 1957 Agricultural Stabilization Act S.C. 1957, C.22. Succeeded the Agricultural Prices Support Act.
- 1957 Treaty of Rome established the European Common Market.
- 1958 First time that the Canadian Wheat Board failed to make a final payment (Oats Pool, 1956-57).
- 1958 Grain Farmers march on Ottawa.
- 1958 Western Grain Producers Acreage Payment Regulations P.C. 1958-1442.
- 1958 Bracken Enquiry into the Distribution of Railway Boxcars P.C. 1958-181.
- 1959 Supreme Court upheld the Board of Transport Commissioners' ruling that demurrage charges on boxcars is permitted at terminal elevators after ten days.
- 1959 Cabinet suspended Board of Transport Commissioners' ruling on demurrage.
- 1959 International Wheat Agreement (No. 4) P.C. 1959-480.
- 1959 Formal institution of Canada-United States Quarterly Meetings on wheat and related matters.
- 1959 Food for Peace Conference (Wheat Utilization Committee).
- 1959 Bracken formula for boxcar allocation instituted.
- 1959 St. Lawrence Seaway opened.

- 1959 Canadian Wheat Board pricing policy changed to take advantage of new freight conditions consequent on St. Lawrence Seaway opening.
- 1959 Crop Insurance Act S.C. 1959, C.42 et seq. Crop Insurance Test Areas Act S.M. 1959, C.14; the Saskatchewan Crop Insurance Act S.S. 1960, C.57.
- 1959 Royal Commission on Transportation P.C. 1959-577.
- 1960 Prairie Grain Provisional Payments Act S.C. 1960, C.2.
- 1960 Prairie Grain Loans Act S.C. 1960, C.1.
- 1960 Freedom from Hunger campaign.
- 1960 Western Grain Producers Acreage Payment Regulations, 1960.
- 1960 Addition of Title IV to United States Public Law 480.
- 1960 Canadian Wheat Board instituted off quota feed mill policy.
- 1961 Railway Act amended to include rapeseed as a grain.
- 1961 Report of the Royal Commission on Transportation (MacPherson) recommended branch line abandonment and subsidy to cover losses on grain transport.
- 1961 Agricultural Rehabilitation and Development Act S.C. 1960.
- 1961 Sale of wheat to China under long term credits.
- 1962 ECC Ministerial decision implemented the Common Agricultural Policy.
- 1962 Western Grain Producers Acreage Payment Regulations, 1962.
- 1962 Extension of U.S.A. title IV P.L. 480 provisions to the private grain trade.
- 1962 Canadian dollar value fixed at exchange rate of $92\frac{1}{2}$ ¢ vis-a-vis the U.S. dollar.
- 1962 Introduction of the European Common Market Regulations, including the import levy system.

- 1962 International Wheat Agreement (No.5) P.C. 1962-631.
- 1963 Inauguration of the World Food Program.
- 1962 World Food Congress (Freedom from Hunger) Washington, June.
- 1963 Winter Storage Subsidy on feed grain in Eastern Elevators paid by Federal Government.
- 1963 Sale of 250 million bushels of wheat to U.S.S.R.
- 1964 Kennedy Round of tariff reductions began, under the General Agreement on Tariffs and Trade.
- 1964 Minimum Import Price System applied in the United Kingdom.
- 1964 Export Flour Adjustment Policy discontinued by the Canadian Wheat Board.
- 1964 Canadian Wheat Board H.Q. Building expanded.
- 1965 International Wheat Agreement extended by protocol for one year, without amendment.
- 1965 Asian wheat production exceeded two billion bushels for the first time.
- 1965 Grain Transportation Committee formed.
- 1966 International Wheat Agreement again extended by protocol for one year to July 31, 1967.
- 1966 Winter Storage Subsidy on feed grain in Eastern elevators cancelled.
- 1966 National Transportation Act S.C. 1966-67, C.69 (An Act to define and implement a national transportation policy for Canada).
- 1966 Livestock Feed Assistance Act S.C. 1966, C.52. Canadian Livestock Feed Board established.

1967. Price and quantity obligations under the International Wheat Agreement ceased; administrative provisions extended until June 30, 1968.
- 1967 Federal Treasury guaranteed price equivalent of \$1.95^{1/2} basis No. 1 Northern, Lakehead, on Canadian Wheat Board sales of wheat, until beginning of IGA.
- 1967 International Grains Arrangement negotiated under the Kennedy Round and special Rome Conference.
- 1968 Canada Grains Council formed.
- 1968 International Grains Arrangement came into effect July 1. World Prices dropped below the arranged minimums; Canadian prices held.
- 1968 Prairie Grain Advance Payments Act amended to double the payment rate and to provide advances to cover cost of drying grain.
- 1969 Canadian prices dropped below the IGA arranged minimums.
- 1969 Canadian Wheat Board selling prices to Canadian buyers for domestic use held at the \$1.95^{1/2} equivalent level. Two price system.
- 1969 Block Loading System instituted by the Canadian Wheat Board as a method of calling forward desired kinds and grades of grain.
- 1970 Canadian dollar unpegged.
- 1970 Boden Committee reviewed and reported on the delivery quota system for Western Canadian grain.
- 1970 Canadian Wheat Board inaugurated quota system aimed at making deliveries more selective and market-oriented, and at keeping adequate working space in country elevators.
- 1970 Wheat and Barley pools (1968-69) failed for the first time to make a final payment, and for the second time there was no final payment on an Oats pool (1968-69).
- 1970 Federal Government Wheat Acreage Reduction Program (Operation Lift) in effect; wheat planting down 50%.

- 1970 Delivery quota regulations changed to eliminate the unit quota and to move from specified acreage quota to seeded acreage (except for wheat) plus assigned acreage; each permit holder allowed two delivery points.
- 1971 Quota regulations again changed to a completely assignable acreage base, and terminable quotas introduced.
- 1971 Canada Grain Act S.C. 1970-71, C.7; replaced the Board of Grain Commissioners for Canada with the Canadian Grain Commission.
- 1971 Prairie Grain Advance Payments Act amended S.C. 1971, C.P-18.

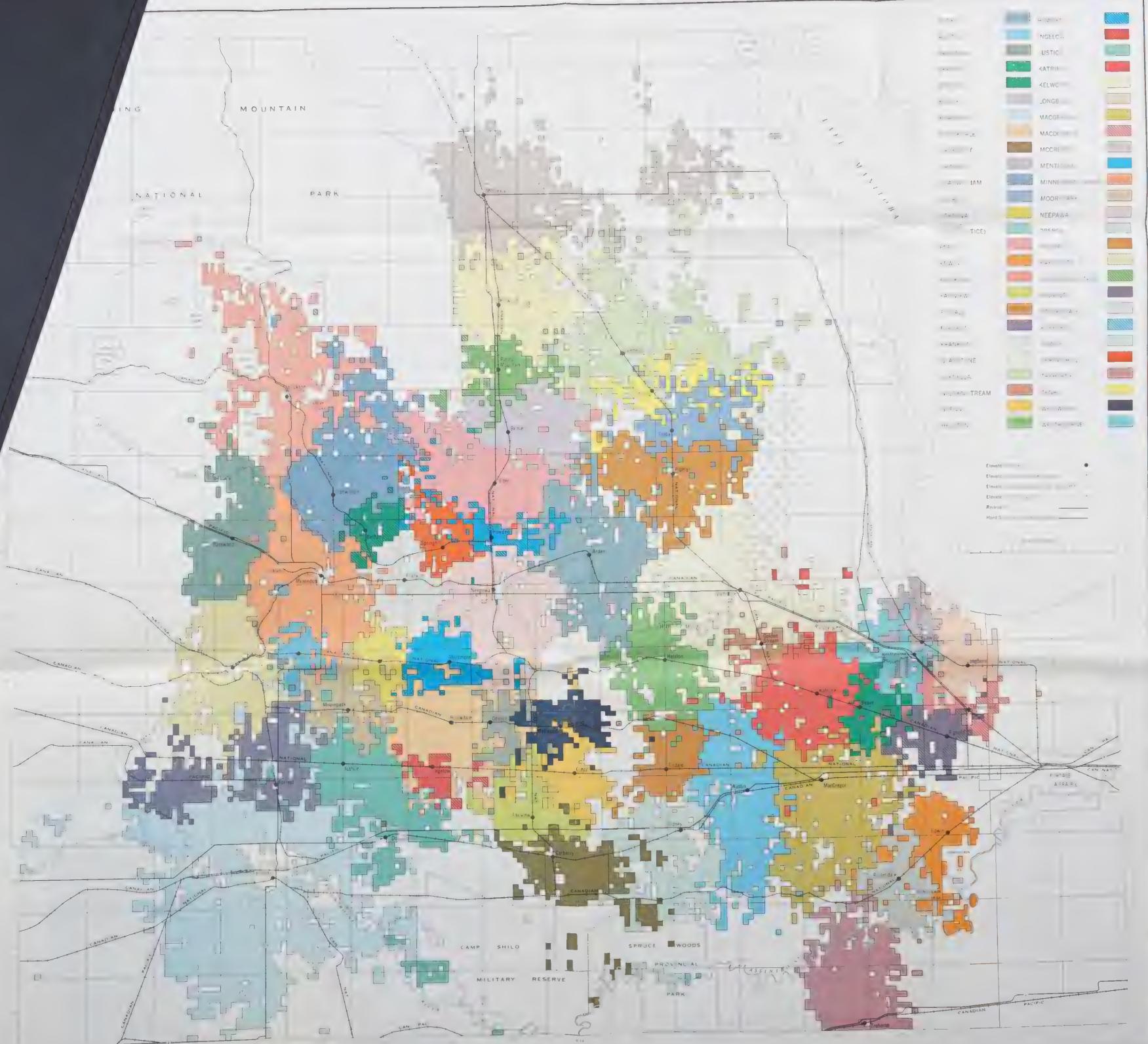




Figure 2. Grain farms in relation to their respective delivery points, Brandon-Neepawa Region, Manitoba, 1968-69

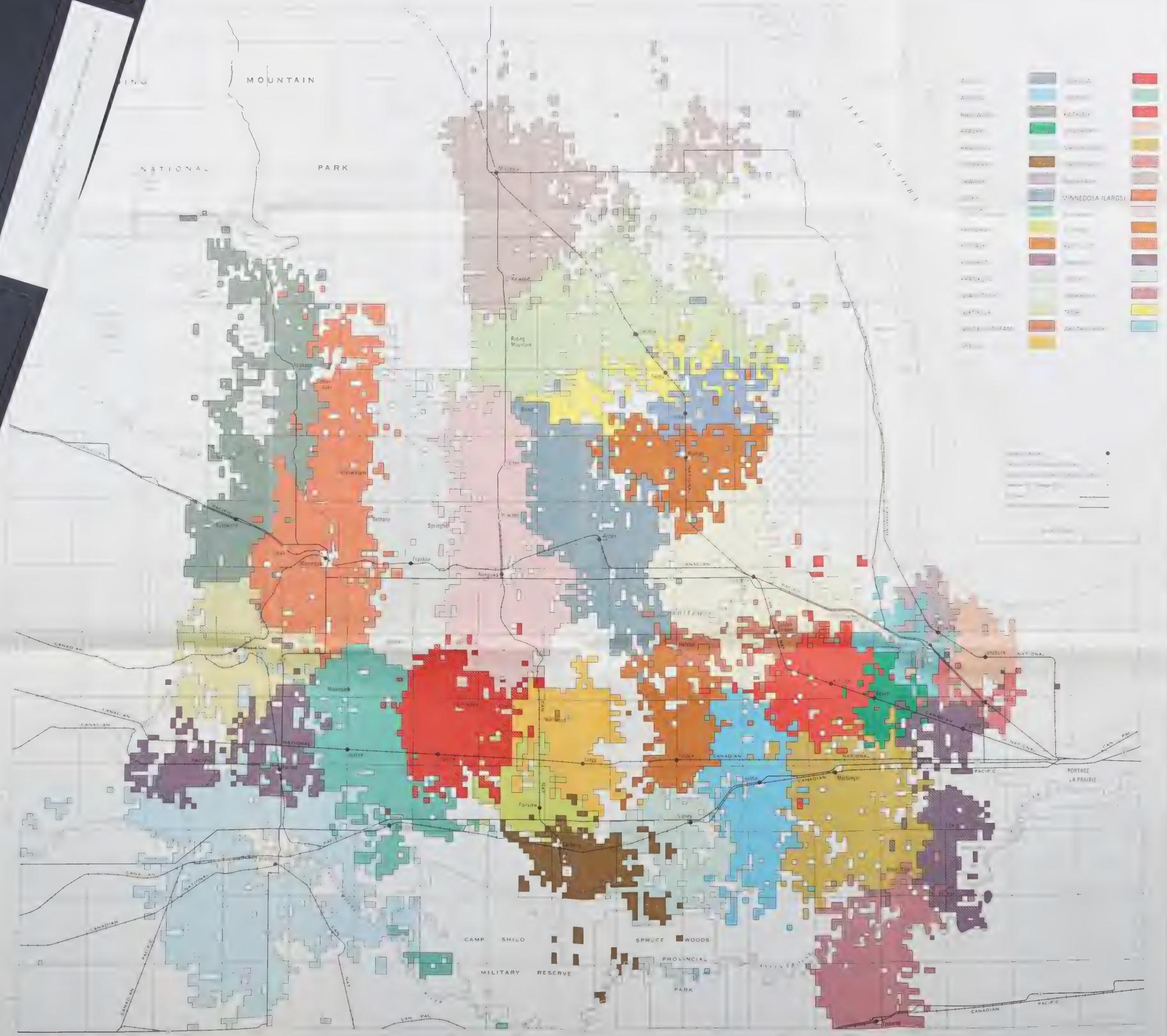


Figure 3. Grain farms and their probable delivery points had the elevators specified in Table 35 been closed in 1962-63

INVENTAIRE DES TERRES DU CANADA
POSSÉDÉS AGRICOLES DES SOLS

CANADA LAND INVENTORY
SOIL CAPABILITY FOR AGRICULTURE

DESCRIPTIVE LEGEND

LEGÈRE DESCRIPTIVE

Ce classement regroupe les sols minéraux en sept classes d'après les informations fournies par les propriétaires et les agriculteurs. Les sols sont classés en quatre groupes : 1) sols aptes à la production continue de grandes cultures; 2) sols aptes à la production continue de petites cultures vivaces et clairsemées; 3) sols aptes à la production continue de plantes fourragères vivaces et clairsemées; 4) sols aptes à la production continue de plantes fourragères vivaces et clairsemées, mais dont les proportions sont inférieures à celles de la classe 3. Ces derniers sont classés en deux sous-classes : 1) sols aptes à la production continue de plantes fourragères vivaces et clairsemées; 2) sols aptes à la production continue de plantes fourragères vivaces et clairsemées, mais dont les proportions sont inférieures à celles de la classe 1.

Le classement regroupe les principales limitations :

• Les sols sont soumis à une ou plusieurs méthodes de gestion, dans un système qui leur convient.

• Un terrain exigeant des améliorations, y compris le défrichement; lesquelles peuvent être exécutées immédiatement par l'exploitant lui-même, ou après quelques années; ou bien, elles sont effectuées par l'exploitant ou par d'autres personnes, mais dans des conditions affectées. Un terrain exigeant des améliorations ou déjà amélioré par l'exploitant lui-même, est classé dans les limitations présentes.

• On ne tient pas compte de la distance des marchés de la qualité des sols, mais on tient compte de l'âge des fermes, du mode de tenue, des systèmes de culture, de l'habitat et des méthodes d'exploitation, et des dommages possibles causés aux récoltes par des tempêtes.

• Le sol n'est pas nécessaire pour la production continue de grandes cultures, mais il est nécessaire pour l'établissement de vergers, de cultures de petite fruit et des plantes d'ornement, ou pour l'établissement de réserves et de fourrés.

• Les sols sont classés en fonction de la manière dont ils sont utilisés, et des sols pour des fins agricoles.

Chaque classe comprend plusieurs sortes de sols, dont certains dans une même classe sont gérés de manière différente et traités différemment.

CLASSE 1 UTILISATION POUR LES CULTURES

Ces sols sont profonds, issus de bacs drainés ou imperméabilisés drainés et renouvelés tous les ans. L'usage naturel, si bien que peu d'éléments sont utilisés, mais qui n'a pas été modifiée par l'homme. Ces sols sont bons, grâce à une production qui va d'accord avec le modeste éclat pour une grande variété de récoltes de grande culture.

CLASSE 2 SOUS-COMPTEUR D'IMMÉDIATE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU IMPOSENT DES MESURES MODÉRÉES DE CONSERVATION

Ces sols sont modérément limités, mais peuvent être améliorés par des méthodes simples. Les trousses l'exploitent avec un minimum de difficultés. Une bonne gestion a toute une production annuelle de végétaux et de légumes.

CLASSE 3 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU IMPOSENT DES MESURES SPÉCIALES DE CONSERVATION

Ces limitations sont assez sévères, mais peuvent être améliorées par les facteurs suivants : échelonnement et bordure d'exception des mesures de préparation du sol, ou l'application d'engrais chimiques, ou l'ajout de matières organiques. Elles se rapportent à l'usage ou à plusieurs des conditions suivantes : échelonnement et bordure d'exception des mesures de préparation du sol, semis et moisson, ou l'ajout de matières organiques. Ces sols peuvent produire une production annuelle de légumes, mais la gestion de ces sols permet une production annuelle de légumes à modérément élevée.

CLASSE 4 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU IMPOSENT DES MESURES SPÉCIALES DE CONSERVATION

Ces limitations sont assez sévères, mais peuvent être améliorées par les facteurs suivants : échelonnement et bordure d'exception des mesures de préparation du sol, ou l'application d'engrais chimiques, ou l'ajout de matières organiques. Elles se rapportent à l'usage ou à plusieurs des conditions suivantes : échelonnement et bordure d'exception des mesures de préparation du sol, semis et moisson, ou l'ajout de matières organiques. Ces sols peuvent produire une production annuelle de légumes, mais la gestion de ces sols permet une production annuelle de légumes à modérément élevée.

CLASSE 5 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU IMPOSENT DES MESURES SPÉCIALES DE CONSERVATION

Ces sols sont modérément limités, mais peuvent être améliorés par des méthodes simples. Les trousses l'exploitent avec un minimum de difficultés. Une bonne gestion a toute une production annuelle de végétaux et de légumes.

CLASSE 6 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU IMPOSENT DES MESURES SPÉCIALES DE CONSERVATION

Ces sols sont modérément limités, mais peuvent être améliorés par des méthodes simples. Les trousses l'exploitent avec un minimum de difficultés. Une bonne gestion a toute une production annuelle de végétaux et de légumes.

CLASSE 7 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU POUR LES PLANTES FOURRAGÈRES VIVACES

Ces sols fournissent une source de ferme une certaine production annuelle de légumes, mais l'exploitation qu'il y a une grande partie d'y affecter les conditions suivantes : échelonnement et bordure d'exception des mesures de préparation du sol, ou l'application d'engrais chimiques, ou l'ajout de matières organiques. Ces sols peuvent produire une production annuelle de légumes, mais la gestion de ces sols permet une production annuelle de légumes à modérément élevée.

CLASSE 8 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU POUR LES PLANTES FOURRAGÈRES VIVACES

Ces sols fournissent une source de ferme une certaine production annuelle de légumes, mais l'exploitation qu'il y a une grande partie d'y affecter les conditions suivantes : échelonnement et bordure d'exception des mesures de préparation du sol, ou l'application d'engrais chimiques, ou l'ajout de matières organiques. Ces sols peuvent produire une production annuelle de légumes, mais la gestion de ces sols permet une production annuelle de légumes à modérément élevée.

CLASSE 9 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU POUR LES PLANTES FOURRAGÈRES VIVACES

Ces sols fournissent une source de ferme une certaine production annuelle de légumes, mais l'exploitation qu'il y a une grande partie d'y affecter les conditions suivantes : échelonnement et bordure d'exception des mesures de préparation du sol, ou l'application d'engrais chimiques, ou l'ajout de matières organiques. Ces sols peuvent produire une production annuelle de légumes, mais la gestion de ces sols permet une production annuelle de légumes à modérément élevée.

CLASSE 10 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU POUR LES PLANTES FOURRAGÈRES VIVACES

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CLASSE 11 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU POUR LES PLANTES FOURRAGÈRES VIVACES

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CLASSE 12 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU POUR LES PLANTES FOURRAGÈRES VIVACES

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CLASSE 13 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU POUR LES PLANTES FOURRAGÈRES VIVACES

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CLASSE 14 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU POUR LES PLANTES FOURRAGÈRES VIVACES

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CLASSE 15 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU POUR LES PLANTES FOURRAGÈRES VIVACES

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CLASSE 16 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU POUR LES PLANTES FOURRAGÈRES VIVACES

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CLASSE 17 SOUS-COMPTEUR D'IMMÉDIATE MODÉRÉE RESTRICTION DES POSSIBILITÉS QUI RESTREIGNENT LA GAMME DE CULTURES OU POUR LES PLANTES FOURRAGÈRES VIVACES

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INVENTAIRE DES TERRES DU CANADA
POSSÉDÉS AGRICOLES DES SOLS

CANADA LAND INVENTORY
SOIL CAPABILITY FOR AGRICULTURE

DESCRIPTIVE LEGEND

In this classification the mineral soils are grouped into seven classes for agricultural use. Classes 1, 2, 3, 4 and 5 are considered capable of sustained field crops. Those in classes 6 and 7 are only for permanent forage crops and those in class 8 are not for agriculture.

Some of the important factors on which the classification is based:

The soils will be well managed and cropped, under a long-term mechanized system.

Land requiring improvement, including clearing, must be made available for cultivation. This includes land with slopes, hazards or hazards in use after the improvements have been made. Land requiring improvement beyond the means of the farmer himself.

The following are no considered distances to market, kind of roads, location, size of farm, type of ownership, cultural patterns, soil characteristics of individual properties, and hazard of cross drainage by streams.

The classes are based on intensity, rather than kind, of their limitations for agriculture. Each class includes many kinds of soil and many of the soils in a class are moderately limited by one or more treatments.

SOL IN THIS CLASS HAVE NO SIGNIFICANT LIMITATIONS FOR AGRICULTURE

The soils are deep, well and imperfectly drained, hold moisture well, and are moderately well suited for agriculture. They may be managed and cropped with little difficulty. Under good management they are moderately high in productivity.

SOL IN THIS CLASS HAVE MODERATELY SEVERE LIMITATIONS THAT RESTRICT THE RANGE OF CROPS OR REQUIRE SPECIAL MANAGEMENT

The soils are deep and hold moisture well. The limitations are moderate and the soils can be managed and cropped with little difficulty. Under good management they are moderately high in productivity.

SOL IN THIS CLASS HAVE MODERATELY SEVERE LIMITATIONS THAT RESTRICT THE RANGE OF CROPS OR REQUIRE SPECIAL MANAGEMENT

The limitations are more severe than for Class 2 soils. They affect one or more of the following practices: timing and size of tillage, plowing and harrowing, seedbed preparation, fertilizer application, irrigation, or management they are low to moderately high in productivity for a fairly wide range of crops.

SOL IN THIS CLASS HAVE SEVERE LIMITATIONS THAT RESTRICT THE RANGE OF CROPS OR REQUIRE SPECIAL CONSERVATION PRACTICES, OR BOTH

The limitations seriously affect one or more of the following practices: timing and size of tillage, plowing and harrowing, seedbed preparation, fertilizer application, irrigation, or management they are low to moderately high in productivity for a fairly wide range of crops or require special conservation practices.

SOL IN THIS CLASS HAVE VERY SEVERE LIMITATIONS THAT RESTRICT THE CAPABILITY TO PRODUCING PERENNIAL FORAGE CROPS, AND IMPROVE PRACTICES ARE FEASIBLE

The limitations are so severe that the soils are not capable of use for sustained production of annual field crops. The soils are poor, and may be improved by use of farm machinery. The improvement practices may include clearing of bush, cultivation, seeding, fertilizing, or water control.

SOL IN THIS CLASS HAVE ONLY PRODUCTION OF PERENNIAL FORAGE CROPS, AND IMPROVEMENT PRACTICES ARE FEASIBLE

The soils provide some sustained grazing for lame animals, but the limitations are so severe that improvement by use of farm machinery is not feasible. The soils are poor, and may be improved by use of farm machinery, or may not respond to improvement, or the grazing season may be very short.

SOL IN THIS CLASS HAVE NO CAPACITY FOR PASTURE

This class also includes rangeland, other non-soil areas, and bodies of water too small to show on the map.

ORGANIC SOILS NOT RELATED TO CLASSES

Subclasses

Each class is divided into subclasses on the basis of local conditions. The classes are as follows:

SUBCLASS C - adverse climate — The main limitation is low temperature, low or poor distribution of rainfall during the cropping season, or condensation of these.

SUBCLASS D - flooding — Poor damage from erosion limits agricultural use of the land.

SUBCLASS E - inundation — Flooding by streams or lakes limits agricultural use.

SUBCLASS F - stones — Stones interfere with tillage, planting, and harvesting.

SUBCLASS G - shallowness to solid bedrock — Shallow less than three feet from the surface.

SUBCLASS H - adverse topography — Either steepness or the pattern of slopes limits agricultural use.

SUBCLASS W - excess water — Excess water other than flooding limits use for organic soil. It may be due to poor drainage, or to water from a nearby table, swamp or runoff from surrounding areas.

SUBCLASS X - Soils having a moderate limitation caused by the cumulative effect of two or more adverse characteristics which singly are not serious enough to affect the cropping zone.

CONVENTIONS

Large order numbers define capability classes. Small numbers define the proportion of the class out of a total of 10 letters placed after class numbers denote the subclasses, i.e. limitations.

*Denotes class or subclass not present on the map.

EXAMPLES

An area of Class 1 with topography and stoniness limitations is shown as 1.1.

An area of Class 2 with topography, texture, and Class 3 with stoniness limitations, in the proportions of 7.3 is shown as 2.14.

CLASSE 1

CLASSE 2

CLASSE 3

CLASSE 4

CLASSE 5

CLASSE 6

CLASSE 7

CLASSE 8

CLASSE 9

CLASSE 10

CLASSE 11

CLASSE 12

CLASSE 13

CLASSE 14

CLASSE 15

CLASSE 16

CLASSE 17

NEEPAWA

MANITOBA

WEST OF PRINCIPAL MERIDIAN — OUEST DU MÉRIDIEN PRINCIPAL

Scale 1:50,000 Echelle
Kilometers
Kilometres
Miles
Milles



SOUVRÉGIONS CLIMATIQUES

HEEPAWA 62 J

Catalogue élaboré par l'Institut de recherches sur les sols, Direction de la recherche, ministère de l'Agriculture et des Ressources naturelles, Ottawa, 1967. Imprimé par la Société canadienne d'impression et de reliure, Ottawa, 1967. Catalogue élaboré par l'Institut de recherches sur les sols, Direction de la recherche, ministère de l'Agriculture et des Ressources naturelles, Ottawa, 1967. Imprimé par la Société canadienne d'impression et de reliure, Ottawa, 1967.

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